JOURNAL OF THE ROYAL HORTICULTURAL SOCIETY

Vol. LXXVII Part 5

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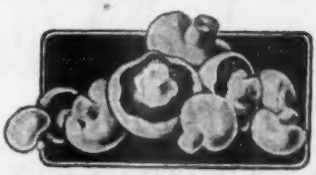

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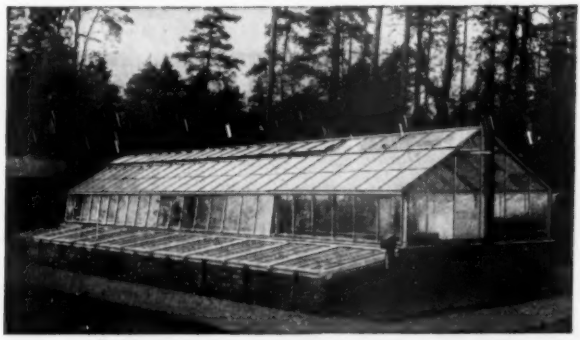

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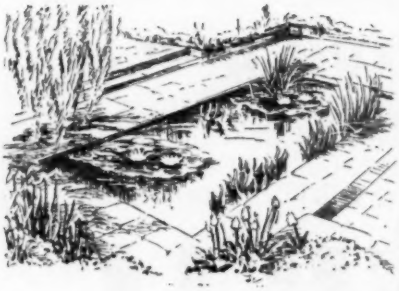

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Sounds wonderful, but I suppose it will cost me a fortune ?
No ! One three and threepenny bottle will do 1,600 square feet — which I should say is just about the size of your lawn.
I'll stop this painful task at once. ' Dicotox ', you said ?
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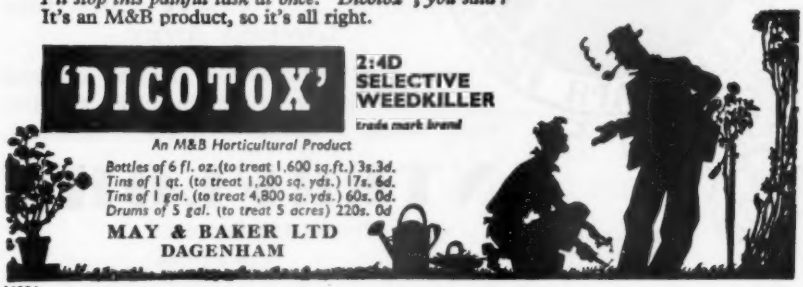
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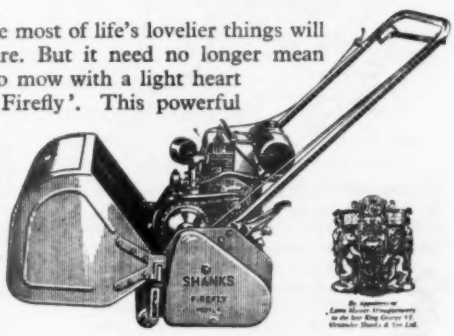

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JOURNAL OF THE ROYAL HORTICULTURAL SOCIETY

Vol. LXXVII Part 5

May 1952

THE SECRETARY'S PAGE

ANNOUNCEMENTS—MAY AND JUNE

Shows

TUESDAY, May 20 to FRIDAY, May 23 For details see below.	CHELSEA SHOW.
WEDNESDAY, June 4 12 NOON to 6 P.M. THURSDAY, June 5 10 A.M. to 5 P.M.	Iris Society's Show.
TUESDAY, June 10 12 NOON to 6 P.M.	Fortnightly Show. National Cactus and Succulent Society's Competition.
WEDNESDAY, June 11 10 A.M. to 5 P.M.	British National Carnation Society's Pink Competition.
TUESDAY, June 24 12 NOON to 6 P.M.	Fortnightly Show. Flowering Tree and Shrub Competition. British Delphinium Society's Show.
WEDNESDAY, June 25 10 A.M. to 5 P.M.	Cactus and Succulent Society's Competition.
FRIDAY, June 27 12 NOON to 7 P.M. SATURDAY, June 28 10 A.M. to 5 P.M.	National Rose Society's Show.

Lectures

TUESDAY, June 10, at 3 P.M. "Cultivation of Cacti and Succulents" by MRS. VERA HIGGINS, M.A., F.L.S., V.M.H.

TUESDAY, June 24, at 3 P.M. "The Snow Mountains of China" by DR. J. F. ROCK.

Demonstrations at Wisley—The following demonstrations will be given at Wisley, that on the second day being in each case a repetition of that given on the first.

Vegetable Garden

May 7–8. Thinning, Transplanting and Successional Cropping. (Commencing at 2 P.M.)

Flower Garden

May 28–29. The Summer Pruning of Shrubs. (Commencing at 2 P.M.)

Colorado Beetle—The Ministry of Agriculture and Fisheries emphasizes once again the need to be on the alert for any sign of the Colorado Beetle.

During 1951, 8 breeding colonies and 83 single beetles were discovered in England and Wales. Although these figures are less than those for 1950, it is still essential to maintain constant vigilance to prevent the Colorado Beetle from becoming established here.

In order to carry out the Ministry's policy of complete extermination of the pest, it is vital that, as soon as any beetle or grub is discovered, the facts should be reported without delay. Those connected with the horticultural industry can greatly assist the Ministry in its policy.

Any yellowish beetle with black stripes running from head to tail, not across, or any red or reddish-yellow grub found feeding upon potato leaves should be regarded as suspect. Specimens should be placed in a tin box, without holes, with a piece of potato leaf, and the box sent to the Ministry of Agriculture, Plant Pathology Laboratory, 28 Milton Road, Harpenden, Hertfordshire, with a letter stating the exact place where the insects were found and the name and address of the sender. Nothing more should be done until instructions are received from the Ministry.

American Camellia Society—Arrangements have been made by the American Camellia Society for MR. J. A. SLOCOCK to act as honorary agent for them in Great Britain. The annual subscription is £1 15*s*., which includes a quarterly pamphlet giving up-to-date news of new techniques and varieties together with an annual year book, the last number of which included over 300 pages and numerous illustrations. Subscriptions should be sent direct to Mr. J. A. Slocock at Messrs. W. C. Slocock Ltd., Goldsworth Nursery, Woking, Surrey.

ARRANGEMENTS FOR CHELSEA SHOW, 1952

Private View – There will be a special Private View on Tuesday, May 20, between 2 P.M. and 8 P.M., open only to Fellows and Associates on surrender of the special detachable part of their annual tickets. For details please refer to the paragraph relating to Fellows' and Associates' tickets on page 147. **In no circumstances, by payment or otherwise, can extra admissions to the Private View be allowed.**

Dates of Show – The Show will be held on Wednesday, Thursday and Friday, May 21, 22 and 23, in the grounds of the Royal Hospital, Chelsea, London, S.W. 3.

Times – Fellows and Associates

Fellows, Associates, and holders of Fellows' Transferable Tickets are admitted free of charge during the following periods:

Wednesday, May 21	8.30 A.M. to 8 P.M.
Thursday, May 22	8.30 A.M. to 8 P.M.
Friday, May 23	8.30 A.M. to 5 P.M.

The Public

Admission on payment may be obtained only during the following periods:

Wednesday, May 21	12 NOON to 8 P.M.	Admission	15*s.*
Thursday, May 22	8.30 A.M. to 8 P.M.	,,	7*s.* 6*d.*
Friday, May 23	8.30 A.M. to 12 NOON	,,	5*s.*
	12 NOON to 5 P.M.	,,	2*s.* 6*d.*

In no circumstances can admission be gained at any time on Tuesday, May 20, or before 12 noon on Wednesday, May 21.

Admission of Children – Children under five years of age cannot be admitted. The charge for the admission of children over five years of age will be the same as for adults.

Parties – No reduction in the price of admission can be made for parties of visitors, but tickets may be obtained beforehand to save trouble on arrival. Application, accompanied by a remittance to cover the cost of the tickets required, should be made to the Secretary, The Royal Horticultural Society, Vincent Square, London, S.W.1, early in May. Such applications *must* reach the Secretary by the first post on Friday, May 16.

Fellows' and Associates' Tickets – A Fellow subscribing 4 guineas annually receives 1 non-transferable and 5 transferable tickets. The non-transferable ticket has a *detachable* portion which will admit only the Fellow to whom it is issued and one other person to the Private View on May 20.

A Fellow subscribing 3 guineas annually receives 1 non-transferable and 2 transferable tickets. The non-transferable ticket has a *detachable* portion which will admit only the Fellow to whom it is issued and one other person to the Private View on May 20.

A Fellow subscribing 2 guineas annually receives 1 transferable ticket. This ticket has a *detachable* portion which will admit only the Fellow to whom it is issued to the Private View on May 20.

An Associate receives 1 non-transferable ticket. This ticket has a *detachable* portion which will admit only the Associate to whom it is issued to the Private View on May 20.

Each Fellows' ticket, both non-transferable and transferable, will admit one person at any time when the Show is open on Wednesday. Thursday, and Friday, May 21, 22 and 23, but the non-transferable ticket may, of course, be used only by the Fellow to whom it is issued. An Associate's ticket may be used only by the Associate to whom it is issued.

Transferable tickets may not be left at the turnstiles for collection by persons visiting the Show later, but may be posted at the Post Office in Main Avenue.

Catering – It is regretted that it is not possible to provide set luncheons and teas, but buffets for the service of light refreshments will be available. There will also be separate enclosures for the service of alcoholic beverages.

Post Office & Telephones – A Post Office for the transaction of ordinary Post Office business will be found in Main Avenue, as will also several Public Telephone Boxes.

Railway Inquiries – British Railways have an inquiry bureau in the Show, situated in Main Avenue on the corner of Crossway.

Band – The Band of H.M. Grenadier Guards will, by courtesy of the Officer Commanding, play each afternoon in the Ranelagh Gardens, where chairs are provided.

Cloakroom – A cloakroom at which bags, parcels, etc., may be deposited will be situated in Main Avenue.

Catalogue – An official Catalogue and Guide to the Show will be on sale in the Grounds, price *1s. 6d.*

Invalid Chairs – The arrangements for the admission of invalid chairs will be as follows:

On Tuesday, May 20, Fellows and Associates in invalid chairs will be admitted between 2 P.M. and 8 P.M. on presentation of tickets for the Private View. There will be a charge of *5s.* for each chair, and that charge will cover one attendant.

On Wednesday, May 21, no invalid chairs can be admitted.

On Thursday, May 22, invalid chairs will be admitted only between 8.30 A.M. and 12 NOON on presentation of Fellows' or Associates' tickets, or on payment of *7s. 6d.* for the occupant of the chair. There will also be a charge of *5s.* for the chair, and that charge will cover one attendant.

On Friday, May 23, invalid chairs will be admitted only between 8.30 A.M. and 12 NOON on presentation of Fellows' or Associates' tickets, or on payment of *5s.* for the occupant of the chair. There will also be a charge of *5s.* for the chair, and that charge will cover one attendant.

The Society cannot arrange for the provision of invalid chairs, but they may be hired from Messrs. Resilco Invalid Carriages Ltd., 262 King St., London, W. 6.

TRANSPORT

Visitors travelling by car, taxi or coach should alight at the Embankment entrance.

Visitors travelling to London will find the following Railway and Bus Services of London Transport operating from the Main Line Termini:

CANNON STREET (*Railway*). District Line direct to Sloane Square.

CHARING CROSS (*Railway*). District Line direct to Sloane Square. (*Bus*) Number 11 to Lower Sloane Street, Pimlico Road.

EUSTON (*Railway*). Northern Line to Charing Cross, thence by District Line to Sloane Square.

FENCHURCH STREET (*Railway*). Tower Hill direct to Sloane Square.

KING'S CROSS AND ST. PANCRAS (*Railway*). Piccadilly Line from King's Cross and St. Pancras to Leicester Square, thence Northern Line to Charing Cross, thence District Line to Sloane Square. Or Circle Line direct to Sloane Square. (*Buses*) Number 77 or 77A to Trafalgar Square, thence Number 11 or 39 to Lower Sloane Street, Pimlico Road.

LIVERPOOL STREET (*Railway*). By Circle Line direct to Sloane Square. (*Bus*) Number 11 to Lower Sloane Street, Pimlico Road.

LONDON BRIDGE (*Buses*). Number 10 to Victoria, thence by Number 11, 39 or 46 to Lower Sloane Street, Pimlico Road.

MARYLEBONE (*Railway*). Bakerloo Line to Paddington, thence by Circle Line to Sloane Square.

PADDINGTON (*Railway*). Circle Line direct to Sloane Square. (*Buses*) Number 36 or 36A to Marble Arch, Park Lane, thence by Number 137 to Chelsea Bridge Road, Royal Hospital Road.

VICTORIA (*Railway*). District Line direct to Sloane Square. (*Buses*) Number 11, 39 or 46 to Lower Sloane Street, Pimlico Road.

WATERLOO (*Railway*). Northern or Bakerloo Line to Charing Cross, thence by District Line to Sloane Square. (*Bus*) Number 46 to Lower Sloane Street, Pimlico Road.

BAKER STREET (*Railway*). Circle Line direct to Sloane Square. (*Buses*) Number 2, 30 or 74 to Marble Arch, Park Lane, thence by Number 137 to Chelsea Bridge Road, Royal Hospital Road.

WISLEY IN MAY

MANY Fellows who make long journeys to visit the Chelsea Show like to visit Wisley during the same week; and this is a most favourable time to do so, for not only are flowers more numerous and varied than at any other season, but the fresh green foliage of the deciduous trees and shrubs is in itself a source of pleasure. Some items of special interest during May are the Rhododendrons, Azaleas, Magnolias and Primulas in the Wild Garden and on Battleston Hill; Lilacs and Crabs in Seven Acres and Howard's Field; and rock garden plants.

Turning first to the trial collection of hardy hybrid Rhododendrons on Battleston Hill the visitor will find both old and new varieties in a wide range of colour and form. All these are obtainable from nurseries, and their labels indicate those which have received the Society's Awards for their value in the garden. On the opposite side of the broad grass walk the dwarf, evergreen Azaleas will be displaying innumerable pink, rose and mauve flowers. These include the comparatively new planting of Kurume Azaleas (varieties of *Rhododendron obtusum* var. *japonicum*), most of which are happily established, although a few are not completely hardy at Wisley.

The large-flowered deciduous Azaleas are represented by a selection of the best varieties planted at the top of the Hill, and passing these one comes to the beds of Rhododendron species arranged in their botanical series. To see the glowing purple of *R. saluenense* in sunshine, the delicate pink flowers of *R. Schlippenbachii* poised like butterflies, or the combination of blue-green foliage and apricot corollas achieved by *R. concatenans*, is to appreciate the high ratings accorded to many species by those who have made this genus their special study. One of the most conspicuous trees here is a young standard of *Halesia monticola*, the Mountain Snowdrop-tree, larger of flower and more inclined to grow upward than the more common *H. carolina* which often retains the bush form.

In and around the dell, on the far side of the bridge, there are many more Rhododendrons interplanted with Magnolias, Camellias, species of Sorbus and other trees and shrubs which look well in association with

them. Some of the larger specimens on the north side of the ridge were planted fourteen years ago when the Society first acquired this land. Development of the area continues, and during the past winter further clearing and planting has been carried out on the south side.

Leaving Battleston Hill and turning left along the service road the visitor will soon reach the Model Fruit Gardens, passing on the left a border of hybrid Brooms in flower. The three plots were planted five years ago with a selection of tree and soft fruits, the varieties of Apple and Pear having been chosen to give as long a succession as possible. The object of these plots is to give the amateur guidance in the selection of varieties, planting-distances, and methods of training and pruning. As the soil here is very sandy an annual mulch of manure and spent hops is applied.

Crossing Weather Hill, where the golden, melon-scented *Cytisus Battandieri*, the rose-coloured *Cercis Siliquastrum* (Judas Tree), the later Japanese Cherries and many different Crabs are at their best, one comes to the Alpine House where there is still a bright show of flowers. Such small shrubs as the hybrid Brooms *Cytisus Beanii* and *C. kewensis* and Kurume Azaleas, together with the varieties of *Saxifraga Cotyledon*, form a pleasing background for the smaller specimens. These will include several species of Lewisia with white or pink and often prettily veined blooms, *Ramonda pyrenaica* and *R. Nathaliae* with clear lavender flowers lifted above dark hairy rosettes of foliage, *Oxalis enneaphylla* with glistening white flowers among glaucous blue-grey leaves, *O. adenophylla*, lilac-pink but otherwise similar, *Rhodohypoxis Baurii*, freely producing a succession of flowers varying from crimson to pink or white, and *Erinacea Anthyllis*, a little grey-green spiny bush dotted with Pea-shaped lavender-blue blossoms. Unusually vivid patches of colour are formed by pans of the scarlet *Tulipa linifolia* and of single-flowered forms of *Anemone pavonina* in scarlet, pink or purple.

Descending through the Rock Garden one comes upon bright drifts of Aubrietas, Saxifrages and Phlox in many varieties, and there are plenty of other choice plants to be seen. Among these we may mention *Penstemon Scouleri* and *P. Newberryi* covered with lilac and cerise flowers, *Anacyclus maroccanus* forming a leafy mat starred with white Daisies, *Tiarella Wherryi*, a delicate pink-flushed Foam Flower with bronze-mottled leaves, and the intense blue *Omphalodes cappadocica*. Along the pond margins where the Royal Ferns are unfurling rust-coloured fronds, there are Marsh Marigolds and Primulas, and beside the Wistaria-covered bridge the first lovely purple flowers of *Iris laevigata* will expand before the end of the month.

During May there is plenty of colour in every part of the Wild Garden. The lofty hedges of old hybrids of *Rhododendron ponticum*, while serving as admirable windbreaks, give a brave show of flowers, best viewed from the higher parts of the Rock Garden. In the sheltered bays between them may be found trees of *Magnolia Wilsonii* and *M. highdownensis* with nodding snow-white flowers set among delicate young leaves, *Styrax japonica* of equal grace, and *Cornus florida rubra* which rarely fails at Wisley to produce a rose-bracted flowerhead at the tip of every twig. Some shrubs of interest are the white-flowered *Stewartia*

serrata and *Styrax Obassia*, *Daphne pontica* of subdued colouring but most agreeably evening-scented, and *Fothergilla monticola* with short spikes of conspicuously staminate creamy flowers. Among the herbaceous plants which add so greatly to the attraction of the Wild Garden at this season the Primulas are the most prominent. There are also Trilliums in white and pink, Lilies of the Valley in several different forms, Meconopsis in blue, yellow and orange, Soldanellas and Schizocodons with daintily frilled flowers, and many others.

The prospect in Seven Acres where massed trees and shrubs can be viewed across wide stretches of mown grass, is quite different. Here, in a setting of varied greens, appear the delicate tints of Crabs and the later Cherries and the pure white of Exochordas and Spiraeas, *Cornus Nuttallii* and *C. Kousa*. Japanese Quinces, Lilacs and many different species of Berberis provide somewhat stronger colouring.

A pleasant walk can be taken through the Pinetum to Howard's Field, where many different Lilacs will be in flower. The display begins with the old French hybrids 'Lamartine' and 'Mirabeau,' and finishes several weeks later with some of the floriferous, although small-flowered species. Here also are a number of Crabs, Spiraeas and Brooms, and before the month ends the earliest Rose species, *R. primula* and *R. Hugonis*, will be out. On the return journey the visitor will find much of interest in the Award of Garden Merit collection and the adjacent Azalea Garden, and the greenhouses and nearby walls will amply repay inspection.

UNUSUAL AND ORNAMENTAL PLANTS FOR HEDGES

F. P. Knight, F.L.S.

(*Lecture given on November* 6, 1951; THE HON. LEWIS PALMER *in the Chair*)

HEDGES can be more than living walls which surround or divide up a garden, and immediately after accepting the Council's invitation to give this talk, I set out to obtain photographs of examples which, while being of interest in themselves, would also indicate the wide range of plants which could be used to form hedges. It soon became apparent, however, that my main problem would be one of selection and not of collection.

I herewith acknowledge my gratitude to numerous friends for the help I received. Photographs reached me from Canada, the U.S.A., Germany, N. Ireland, as well as from numerous other places in Great Britain. Unfortunately, I was unable to arrange for all the hedges to be photographed, and particularly regret not being able to show a picture of a hedge of *Desfontainea spinosa* in Argyllshire, or of *Drimys aromatica* at Castlewellan in Co. Down. I am particularly indebted to The Division of Horticulture, Central Experimental Farm, Ottawa, for permission to

reproduce examples of their very extensive trials of plants for hedges. Full details are contained in their publication *Hedges and their Uses*, W. T. Macoun, Bulletin No. 142, Dominion of Canada, Department of Agriculture.

It is not my intention to give a lot of technical detail about planting, such as the number of plants to use per lineal yard, but any specific question concerning these points I will gladly answer, if I can. I have tried to keep in mind bringing together examples of unusual hedges, rather than individual plants which could be used to form these.

We commence with several extensive plantings carried out under the general direction of the Roads Beautifying Association, mainly on the Bix Road at Henley-on-Thames. These were not intended as hedges, but were mainly planted to form anti-dazzle strips to separate dual carriageways. The subsequent growth and pruning has resulted in solid hedge-like formations, and no imagination should be required to picture similar plantings on a much smaller scale in the garden. The plants used include *Forsythia intermedia* var. *spectabilis*, *Berberis stenophylla*, *Ulex europaeus* fl. pl. (Double-flowered Gorse), Pyracanthus, beautiful both in flower and in fruit, and *Cotoneaster lactea*. Pyracanthus have not received the attention due to them as hedge plants, but examples such as these, where the plants are growing rather informally, clearly indicate what can be done.

There was an interesting collection of hedges in the Nursery Department of the Royal Botanic Garden, Edinburgh. These included Beech, Holly, *Olearia Haastii* (the New Zealand Daisy Bush), *Ligustrum ionandrum* (a Chinese Privet of neat habit) and a Pyracanthus. Pyracanthus can be used for very formal clipped hedges. One of the best is *P. angustifolia*, which has attractive narrow greyish coloured leaves and orange coloured berries, which usually persist on the plants long after the birds have taken those from other kinds. The taller growing variety, *P. crenulata* var. *yunnanensis*, makes a sturdy evergreen hedge up to 6 or 7 feet in height. Clipping promotes the formation of short side branches which flower and fruit freely.

Two species of Privet from Western China are next. The first, *Ligustrum Delavayanum*, has small leaves which are not unduly mutilated by clipping, and similar in appearance is *L. ionandrum*. There is a good example of the latter at Woodbridge in Suffolk, and although this particular hedge was once killed to the ground by severe frost, it recovered to form a wall-like structure.

Genista virgata, the Madeira Broom, makes a most attractive flowering hedge at Edinburgh. This locality should assure you of its hardiness.

Cotoneaster lactea has already been mentioned, but the hedge shown (Fig. 71) now is a fine illustration of the usefulness of this Chinese species. The berries remain attractive until late February, and the silver coloured young foliage contrasts most attractively against the dark green of the older leaves. Such a hedge should always be cut with secateurs, every branch being treated on its merits.

Viburnum Tinus (Lauristinus) forms one of the most decorative of all hedges for winter effect. The unopened flower heads are attractive and,

where these are interspersed with flowers already opened, the effect is most pleasing. This is a good hedging plant for a shady position.

Elaeagnus pungens makes a good evergreen hedge, but is even more attractive in its silver- or golden-leafed forms.

Rosemary (*Rosmarinus officinalis*) should be used much more frequently to form internal hedges in the garden. It is particularly valuable in hot sandy soils and in areas near the sea. It should not be clipped, but long ends of branches shortened, as required, during the growing season (Fig. 70). The upright form, called 'Miss Jessop's variety,' provides a more formal hedge. *Clethra alnifolia paniculata* would not form a boundary hedge, but can be most effectively employed to make a division within the garden. Not only are the flowers attractive, but the rich yellow autumn foliage is equally valuable.

Chaenomeles japonica (*Cydonia Mauliei*) can be trained into a fine thick hedge (Fig. 72). There is one growing in a garden near Saxmundham, Suffolk, which was raised from the seeds contained in one quince-like fruit. Most attractive use was made at Knaphill in Surrey of Chaenomeles and *Berberis Darwinii* interplanted among Holly and Hawthorn to form impenetrable boundary hedges.

Berberis Darwinii has been frequently used for hedge making, and it is advisable to set out small plants. *B. stenophylla*, a hybrid between this species and *B. empetrifolia*, is perhaps too well known to need description. It is, nevertheless, all too rarely seen as a hedge plant. One of the best examples is that around the Water Garden, not far from the Rock Garden, at Kew. Clipping is carried out in the spring just after flowering, the object being to promote new arching growths which will flower during the following spring.

B. Thunbergii atropurpurea brings colour into garden hedges. The rich purple foliage is not only attractive throughout the spring and summer, but changes in the autumn to give us one of the best of all foliage effects. Numerous other deciduous species and hybrids can be used for hedges, but the very strong growing kinds should be avoided.

Rose hedges could form a considerable part of this lecture, but I have selected and shown for consideration an informal hedge of *Rosa xanthina* var. *spontanea*, which is also met with as var. 'Canary bird.' The example portrayed was planted in 1948, and it is not certain how long it will live, but already it has become famous in Suffolk and beyond. The flowers are large, soft yellow in colour, and borne in great profusion. The "close up" also shows the lovely foliage (Fig. 67). I would grow this plant if only for its leaves.

R. gallica versicolor (*Rosa Mundi*) is shown as a double hedge at Kiftsgate Court. This, with its pink and white striped flowers, is sometimes confused with the York and Lancaster Rose.

Rhododendrons in numerous forms make ideal hedges. I remember MR. COLLINGWOOD INGRAM remarking that it is possible to plant other shrubs closer to Rhododendron hedges than to any others, simply because the Rhododendron roots do not spread. There are fine examples of *R. ponticum* hedges, particularly that on the boundary of Bagshot Park. The wonderful hedge of *R. praecox* (Fig. 68) at the Royal Botanic Garden, Edinburgh, and the unique planting of *R.* 'Temple

Belle' (*Williamsianum* × *orbiculare*) at Werrington Park, near Launceston, Cornwall, show two of many delightful possibilities. The latter, which is about 6 feet high, has to be seen to be believed.

Malus (*Pyrus*) *floribunda*, if planted as well furnished bushes, makes a floriferous hedge more suitable in a large park than a garden. There is such a hedge at Hamburg in Germany, which makes me think of a vigorous Hawthorn hedge dividing two fields in this country. The Pyrus is, perhaps, more attractive in spring because of its delicate pink flower buds.

Prunus incisa, sometimes called the Pigmy Cherry, has been trained to form a hedge in MR. INGRAM'S garden at Benenden, Kent, and the picture shows this flowering right down to ground level.

At Ottawa, such unlikely hedge-making plants as Birch and Larch have been used. To begin with, the more orthodox *Shepherdia argentea* is seen. This is a very hardy shrub and is allied to Elaeagnus and Sea Buckthorn (*Hippophae rhamnoides*). In Britain the latter would be the better choice, but I once saw good plants of Shepherdia in LADY BYNG'S garden at Thorpe-le-Soken.

Acer Ginnala in England is one of the earliest of Maples to colour in the autumn. Although its display is rather fleeting it is worth a place where other more vigorous kinds would out-grow their positions. The slide shows a very shapely example of this as a hedge about 7 or 8 feet high.

Betula populifolia, the American Grey Birch, persists as a good hedge for many years, but eventually, like all such Birches, becomes too woody and fails to withstand continuous cutting.

Larix americana forms a very unusual hedge with its bristly growth, and looks like a large porcupine about to move off.

Next are four examples of very dwarf hedges which perhaps should rank as edges: the first is of a dwarf growing Willow (Salix sp.) The photograph was sent from The Wayside Gardens, Mentor, Ohio, without a precise identification. *Salix rosmarinifolia*, incidentally, makes a good hedge and would be useful near the sea.

Viburnum Opulus nanum which, generally speaking, I find unattractive is shown as a dwarf formal hedge and could be useful where restricted growth is essential.

Teucrium Chamaedrys, the Germander, a dwarf shrubby plant, is effectively used as the boundary of a croquet lawn, and would perhaps be preferable in many places where Catmint (Nepeta) is used.

Erica vagans makes a good dwarf hedge and indicates the possibilities of Ericas generally as hedging plants. I have seen fine informal examples of the larger growing kinds such as *E. arborea*.

At the Forestry Commission's large nursery at Newton, near Elgin, there is a fine hedge of the Western Hemlock, *Tsuga Albertiana* (*T. heterophylla*). I would strongly recommend this where a tall, stout, evergreen hedge is needed. It is pleasant to look at, and remains furnished to the ground if given light on both sides and proper care. I have seen photographs of good hedges of this North American conifer apparently growing well in the London County Council's Nursery at Avery Hill in Kent.

Pinus sylvestris, the Scots Pine, never occurred to me as a good subject for hedge making, until I went to live in Suffolk about eight years ago. In Norfolk and Suffolk, however, may be seen many fine examples of Scots Pine hedges, which not only provide dense screens but give shelter from the east winds. The pines are planted, while young, only a few feet apart, and it is surprising to note that they retain their branches to ground level for many years. The height at which they are stopped varies, but about 10 feet is not unusual (Fig. 73).

Prumnopitys elegans (*Podocarpus andina*), another unusual conifer, which forms a remarkable hedge in the garden at Benchams, Devonshire, has been well described by MR. COUTTS in his article on Hedges and Screens in The Royal Horticultural Society's JOURNAL for July 1944 (Vol. LXIX, part 7, p. 193) and illustrated in the same number as Fig. 63. MR. G. M. TAYLOR wrote to me on March 8, 1951, stating that up to that time this plant had stood about six years in his garden at Longniddry, East Lothian, without being damaged, and commanded attention because of its refreshing greenness.

Beech hedges are so frequently seen that they scarcely merit inclusion in this talk, but I could not resist mentioning the wonderful hedge of this at Meikleour in Perthshire. The general appearance, seen from one end, is of a giant screen about 100 feet or more in height. It is stated that the planting was commenced in 1745, but the men employed on the work "downed tools" to take part in the Jacobite rising and returned to complete their task in 1747. By way of a contrast, I am also showing a slide of a Beech hedge about 6 feet high in its winter character, and also one of Hornbeam, which some people confuse with Beech. Both these trees, when used as hedges, retain their leaves in winter and bring much warmth of colour tc the landscape. Hornbeam is particularly valuable on heavy clay soils.

Lilac hedges are not common, but I found more than I anticipated when I began looking for unusual hedges, and they are widely used in America. One of the interesting features is the ease with which it is possible to renovate old Lilac hedges, even where the main stems of the plants have attained a diameter of at least 4 inches. The new growth one year from the date of cutting back is remarkable and large flower heads are encouraged. This drastic pruning may be done at almost any time from November until the end of March.

Osmanthus Delavayi makes a splendid evergreen flowering hedge. There was a fine example at Werrington Park, but this has now become overgrown. It is interesting to note, however, that self-sown seedlings are growing just underneath. I would recommend this plant as something unusual for hedge planting in a small garden. It is advisable to use small plants from pots, and these will flower even when less than 12 inches high. Although I have no pictures to illustrate them, I have seen good hedges of the more common, but less floriferous, *Osmanthus Aquifolium*. The fine hybrid between *Osmanthus Delavayi* and *Phillyrea decora*, named *Osmarea Burkwoodii*, should make an ideal hedge plant, and I shall use it for this purpose as soon as I get an opportunity.

Poncirus trifoliata (*Aegle sepiaria*) has everything, except being cheaply available in quantity, to recommend it as a boundary hedge to keep out

all intruders, as it is formidably armed with vicious long spines. It produces its clear white orange-blossom flowers in profusion (Fig. 69) and these are followed by small oranges which yield good seeds from which new plants can be easily raised. There is an example of this, as a hedge, at Rosehill, near Saxmundham, Suffolk. A good illustration of a single specimen in full flower is to be found in The Royal Horticultural Society's Conference Report, 1938, on "Ornamental Flowering Trees and Shrubs," facing page 192.

Colletia cruciata is another unusual shrub with strong spines, and although I have never seen a hedge of this, I would like to plant a short length for demonstration purposes. It is certain that no one would break through it without injury to themselves. This is a good late flowering shrub and, although a native of Uruguay, appears to be quite hardy.

Senecio laxifolius did not, at first, suggest itself as a hedging plant, but recently IRIS, LADY LAWRENCE, told me she had seen a most attractive formal hedge of this as far north as Montrose. I have used this freely, with great success, for clothing steep banks by the sea, and shall now plant some hedges when the opportunity occurs. I can well imagine that judicious cutting back, while the plants are in active growth, will encourage the production of new shoots which are silver grey in colour (Fig. 74).

Breaking completely away from shrubs, I was very interested to see a photograph in *Amateur Gardening* of a hedge of *Kochia trichophylla* which was sent to the Editor by a reader living near Coventry. Although an annual, it has great possibilities as a temporary hedging plant which can be raised in quantities and used in formal bedding schemes.

Finally, it occurred to me that, even if after seeing the numerous pictures already shown, it was felt there should still be ways of forming unusual hedges, I would like to conclude this talk by showing a slide of the hunting scenes so skilfully cut out of the hedges of *Cupressus macrocarpa* at Mount Stewart in Northern Ireland.

PROPOSED INTERNATIONAL CODE OF NOMENCLATURE FOR CULTIVATED PLANTS

Historical Introduction

THE need for a comprehensive set of practical, easily understood and internationally acceptable regulations for the naming of cultivated plants has long been evident. Although the code set out below is in its immediate origin a result of the Seventh International Botanical Congress held at Stockholm in July 1950, the first step in its formulation was made nearly 90 years ago by the distinguished Swiss botanist ALPHONSE DE CANDOLLE in a letter to EDOUARD MORREN which was placed before the International Horticultural Congress of Brussels, 1864; this pointed out the desirability of reserving Latin names for species and wild varieties and of using non-Latin fancy names such as 'Bijou,' 'Rainbow' etc. for garden forms. At the International Botanical and Horticultural Congress of Amsterdam, 1865, KARL KOCH likewise drew attention to the confusion which was arising from the use of Latin names for garden forms. In 1866, at the International Botanical Congress of London, KOCH went further; he proposed that such international congresses should deal with matters of nomenclature. There existed then no internationally accepted code of botanical nomenclature, although certain procedures derived from the canons and practice of LINNAEUS and AUGUSTIN PYRAMUS DE CANDOLLE were generally followed.

ALPHONSE DE CANDOLLE, whose legal training and great experience as a systematic botanist fitted him admirably for the task, accordingly drew up his celebrated *Lois de la Nomenclature botanique*. These were discussed and officially accepted by the International Botanical Congress of Paris, 1867. They form the basis of the present *International Code of Botanical Nomenclature*. DE CANDOLLE'S article 40 dealt with the names of plants of horticultural origin: "Seedlings, half-breeds (*métis*) of uncertain origin and sports should receive from horticulturists fancy names (*noms de fantaisie*) in common language, as distinct as possible from the Latin names of species or varieties. When they can be traced back to a botanical species, subspecies or variety, this is indicated by a succession of names (*Pelargonium zonale*, Mrs. Pollock)." In the discussion on this article, DE CANDOLLE insisted on the importance even from the scientific standpoint—DARWIN'S *Origin of Species* had been published in 1859—of stabilizing the nomenclature of cultivated plants, whereas some botanists present considered such plants unworthy of their attention; that unfortunate attitude is still not unknown. Article 40, its wording almost unchanged, survived the redrafting of the *International Rules of Botanical Nomenclature* down to 1935. It is incorporated in the following code as a basic regulation.

Successive horticultural congresses, notably the Brussels Congress of 1910 and the London Congress of 1930, have supplied a few more regulations, leaving, however, many matters untouched. The decisions of the 1930 International Horticultural Congress were accepted by the

1930 International Botanical Congress at Cambridge and added to the third edition of the *International Rules of Botanical Nomenclature* (1935) as Appendix VII (Nomenclature of Garden Plants, by A. B. RENDLE). By this action the nomenclature of cultivated plants became once more the joint concern of both horticulturists and botanists.

A number of proposals for the amendment and extension of Appendix VII were submitted to the International Botanical Congress at Stockholm, 1950. The Subsection on Nomenclature accordingly appointed a special committee (now known officially as the *Committee for the Nomenclature of Cultivated Plants* and informally as the Stockholm Committee) to consider these proposals and also those dealing with the nomenclature of hybrids, a matter to which much attention had been given by ALFRED COGNIAUX at the 1910 Brussels Horticultural Congress. W. H. CAMP (U.S.A.) acted as Chairman of the Stockholm Committee and W. T. STEARN (U.K.) as Secretary; the other members were H. H. ALLAN (New Zealand), B. K. BOOM (Netherlands), J. M. COWAN (U.K.), H. P. DAEPP (Switzerland), J. E. DANDY (U.K.), J. S. L. GILMOUR (U.K.), N. HYLANDER (Sweden), G. H. M. LAWRENCE (U.S.A.), H. W. RICKETT (U.S.A.), R. C. ROLLINS (U.S.A.) and F. C. STERN (U.K.). The Committee met regularly for two weeks. Its recommendations were accepted and adopted by the Botanical Congress, those relating to hybrids in general being officially passed for incorporation in the new *International Code of Botanical Nomenclature*, while those relating to Appendix VII were accepted in principle, their final adoption being conditional on their discussion and approval by a parallel committee of horticulturists acting under the auspices of the International Committee for Horticultural Congresses. This Committee (now known officially as the *International Committee on Horticultural Nomenclature and Registration* and informally as the London Committee) is derived from the Nomenclature Committee of the 1930 London Horticultural Congress but was formed anew late in 1950 with W. T. STEARN as Secretary of this as well as of the Stockholm Committee.

A joint meeting of the two Committees took place at The Royal Horticultural Society's offices, London, on November 22–24, 1951. It was attended by A. P. BALFOUR (U.K.), B. K. BOOM (Netherlands), W. H. CAMP (U.S.A.), J. M. COWAN (U.K.), J. W. S. CRACKNELL (U.K.), H. P. DAEPP (Switzerland), J. E. DANDY (U.K.), J. S. L. GILMOUR (U.K.), H. G. HILLIER (U.K.), N. HYLANDER (Sweden), W. E. TH. INGWERSEN (U.K.), J. LANGE (Denmark), J. LANJOUW (Netherlands), R. MAATSCH (Germany), J. M. S. POTTER (U.K.), W. T. STEARN (U.K.), F. C. STERN (U.K.), A. THORSRUD (Norway), R. DE VILMORIN (France) and R. ZANDER (Germany) as official members and A. G. L. HELLYER, A. SIMMONDS and P. M. SYNGE as observers. The new version of Appendix VII drafted at Stockholm was widely circulated early in 1951 and by September 1951 many proposals for its emendation had been received and correlated.

Under the chairmanship of W. H. CAMP, the joint Committee discussed item by item both the new version and these additional proposals. Despite the considerable initial divergence of views natural to such an international assembly of experts representing a diversity of horticultural and botanical interests, the joint Committee reached general agree-

ment on all points. The task of formally drafting, correlating and arranging these decisions into a code was then entrusted to an editorial committee consisting of W. H. CAMP, J. S. L. GILMOUR and W. T. STEARN. The text as presented below is their joint work. It embodies the decisions of the joint Committee but, owing to the necessity of getting it widely circulated and critically examined by as many horticulturists as possible before the Committee meets again at the International Horticultural Congress of London in September 1952, there has not been time to refer the text back to all members of the Committee for approval of the wording. Copyright in the following text is disclaimed.

These regulations will not be official until they have been formally accepted by the International Horticultural Congress in September 1952 after reconsideration and possibly emendation by the Committee on Nomenclature at the Congress. *Proposals for their modification* can be made by any interested person. They should be written clearly *in English, French or German* and *should reach the Secretary, International Committee on Horticultural Nomenclature and Registration*, c/o the Department of Botany, British Museum (Natural History), Cromwell Road, London, S.W. 7, England, *not later than July* 31, 1952.

W. T. STEARN

SYNOPSIS

Section A. Guiding Principles

Art. C. 1, Importance of a system of nomenclature. 2, Naming of ordinary material from the wild. 3, Naming of special forms originating or maintained in cultivation. 4, Registration of names.

Section B. Names of Categories

Art C. 5, The three main categories; "cultivar" and "variety" differentiated. 6, Supplemental categories in complicated groups.

Section C. Priority and Publication of Cultivar Names

Art. C. 7, Priority, and limitations on priority. 8, Validity of name. 9, Publication of name and description. 10, Non-validity of "listed" names. 11, Place of publication. 12, Rejection of priority for widely used names. 13, Decision where two or more cultivars are grown under the same name. 14, Permitted use of "commercial synonyms" for introductions from one country to another. 15, Use of transliterations, translations and "commercial synonyms." 16, Approved lists of cultivars as starting points for nomenclature.

Section D. Formation and Use of Cultivar Names

Art. C. 17, Vernacular ("fancy") names to be used for cultivars. 18, Typography of cultivar name in the vernacular. 19, Typography of cultivar name if in Latin form. 20, Cultivar name unaffected by change of generic name. 21, Use of the same cultivar name in the same genus. 22, Recommendations for the coining of new names.

Section E. Names of Hybrids Originating in Cultivation

Art. C. 23, Formation of generic and cultivar names. 24, Designation of hybrid groups: (a) The formula as a designation; (b) The collective name for hybrid groups; (c) Use of the name of one parent for the name of a hybrid group; (d) Necessity of a Latin description when the name of a hybrid group is in Latin form; (e) Publication of names of hybrid groups if in common language; (f) Collective names derived from the Latin names of the parents; (g) Names of subsidiary groups in large and complicated hybrid groups. Special note on procedure.

Section F. Names of Latin Form applied to Hybrids in General

Art. C. 25, Names in Latin form follow the International Code of Botanical Nomenclature (Appendix H), here reproduced for convenience. I.C.B.N. Art. H. 1, Hybrids between two species of the same genus. 2, Hybrids between infra-specific members of the same species. 3, Bigeneric hybrids. 4, Multispecific and multigeneric hybrids. 5, Complicated hybrids of same parentage, and "nothomorphs." I.C.B.N. Art. 49, Valid publication of names of hybrids in Latin form.

Section G. Names of Bud-mutants ("Sports") and Re-selected and Improved Strains

Art. C. 26, Names of bud-mutants. 27, Names of re-selected and improved strains.

Section H. Special Categories

Art. C. 28, Purpose of special categories where greater nomenclatural precision is desired. 29, Special formulas for grafted or budded plants. 30, Additional special categories and definitions: (a) The line; (b) The clone; (c) The hybrid-group; (d) The line-hybrid; (e) The convariety; (f) Recommendations for the use of the categories of apomict and clone. 31, Names of polyploid or genetically differentiated races. 32, Names and formulae used for graft chimaeras ("graft hybrids"); "mixomorphs."

TEXT

SECTION A

Guiding Principles

Art. C. 1. Cultivated plants are basic to civilization. It is important therefore, that a precise, stable and generally accepted system of nomenclature should be available for their naming.

Art. C. 2. The naming of cultivated plants which differ in no appreciable degree from their wild parental stock is governed by the *International Code of Botanical Nomenclature*.

Art. C. 3. The naming of special forms originating or maintained in cultivation is governed by the following regulations. A legitimate name

is a name in accordance with these regulations. [They are applicable to such plants used in agriculture and forestry as well as in horticulture.]

NOTE. The phrase "originating or maintained in cultivation" covers new variants raised from seed collected in the wild and wild variants which would not normally receive a Latin botanical name, brought into cultivation direct from the wild and considered of interest to cultivators.

Art. C. 4. Adequate and accurate registration of names is of first importance for their stabilization.

NOTE. It is recommended that when the existing registration of a plant group is now purely national, this should be placed on an international basis and that international registries be set up for those groups of which there is no official registration.

SECTION B

Names of Categories

Art. C. 5. Cultivated plants, like wild plants, are named at three main systematic levels, i.e. generic, specific and varietal. Names at these three levels are:

(1) *Generic*, i.e. ordinary generic names, e.g. *Rosa*, *Lilium*, or comparable names applied to bigeneric or multigeneric hybrid groups ("hybrid genera"), e.g. × *Heucherella*, × *Potinara*; such names cover all members of a particular genus or hybrid group.

(2) *Specific*, i.e. the specific name for a species. A formula, a name, or a collective phrase is used for an interspecific hybrid, this designation covering the offspring of the cross concerned.

(3) *Varietal*, i.e. the varietal name for a wild variant, or the cultivar name for a special form (often a clone or line) originating or maintained in cultivation (see Art. C. 3, Note).

NOTE. A *cultivar* (abbreviated as *cv.*) is a variant not known to occur in the wild or not known to have an equivalent in the wild in sufficient numbers to justify botanical recognition, as distinct from a *variety*, which is a wild variant warranting botanical recognition. In horticulture cultivars are often referred to as "horticultural varieties" or simply "varieties" but it is best to reserve the term "variety" for wild variations. *EXAMPLES.* In the name *Sedum dasyphyllum* var. *glanduliferum*, which is the name of a variety of known wild origin, the first word (*Sedum*) is on the generic level, being the name of the genus; the second word (*dasyphyllum*) is on the specific level and is known technically as the specific epithet; the third word (*glanduliferum*) is on the varietal level and is known technically as the varietal epithet. Similarly in the name *Sedum spectabile* 'Brilliant,' which is the name of a cultivar, the word 'Brilliant' is on the varietal level and is called the *cultivar name* in this Code.

Art. C. 6. When it is desirable in large and complicated groups, the above three categories of names may be supplemented by the insertion of others. Thus the generic name may be followed by a subgeneric or sectional name; a specific by a subspecific; a varietal by a form name. Within a variable species or interspecific hybrid, a group of cultivars may be designated by an additional name or collective phrase inserted between the specific name and the cultivar name (see Art. C. 24 (g)). When greater precision is desired, special categories may be used (see Art. C. 28–32).

SECTION C

Priority and Publication of Cultivar Names

Art. C. 7. In principle the correct name for a cultivar is the earliest legitimate name; other names are synonyms. However, because of linguistic and other difficulties, in certain instances the use of validly published synonyms may be permitted (see Art. C. 12–16).

Art. C. 8. A name has no standing unless validly published.

Art. C. 9. Valid publication is effected by the sale or distribution of printed or similar mechanically duplicated matter* giving both the name and description of the plant concerned (with or without a figure) or a reference to a previously published description, in any language using Roman characters.

NOTE. Official registrars (see Art. C. 4) should set standards as to what constitutes a proper and sufficient description for plants in a particular group.

Art. C. 10. The mention of a cultivar name in a catalogue or list without description or reference to a previously published description is not valid publication of the name, even though a figure be given.

Art. C. 11. The cultivar name and description should be published in a horticultural or botanical periodical, or in a monograph, handbook or other standard work, or a dated horticultural catalogue, if possible with an indication of the breeder, selector or introducer. It is desirable that this work should be one of a reasonably permanent nature.

Art. C. 12. When the earliest validly published cultivar name is one which is no longer in use or is in general use for another plant, so that its revival would lead to widespread confusion and inconvenience, the more recent generally used name is to be retained. The rejected name is to be recorded as a synonym in some appropriate manner, preferably in the official register of the group.

Art. C. 13. When two or more cultivars are widely grown under the same name, the official registrar has the power to decide for which one the name shall be retained. In groups where there is no registry, the principle of priority should normally be applied.

Art. C. 14. When a plant is introduced from one country into another, its original cultivar name should normally be retained if it has been published in accordance with these regulations. However, because of differences in language or custom, it is sometimes advisable to translate or in some manner to change the name.

(a) Such translated or changed names are to be known as *commercial synonyms* and are to be used only after approval by the registrar of the group concerned. The official register will list such synonyms; they should also appear in lists and catalogues.

EXAMPLES. Rose 'Peace' (Meilland) is a commercial synonym in the U.S.A. of Rose 'Mme. A. Meilland.' Pear 'Bartlett' is a commercial synonym in the U.S.A. of Pear 'Williams Bon Chrétien.'

(b) If no official registry of a group exists, catalogues and lists

* Printed or similar mechanically duplicated matter is reading matter multiplied by a mechanical process whereby a number of identical legible and indelible copies are made from the same inked surface.—W. T. S.

may use commercial synonyms but these should be followed by an indication of the original name.

Art. C. 15. A cultivar name which appeared first in a language not printed in Roman characters should be transliterated into Roman characters or translated into a language using Roman characters. The first transliteration or translation should be adopted, provided it is published together with a description in a language using Roman characters.

EXAMPLE. The cultivar name in the full name *Prunus serrulata* 'Amanogawa' is the accepted transliteration from Japanese script; the translation 'Milky Way' should not now be introduced as a cultivar name for this plant.

NOTE. In general, transliterations should not be replaced by commercial synonyms; however, when both transliterations and translations introduce difficulties of language or custom, commercial synonyms may be used instead as set forth in Art. C. 14. Thus the English translation 'Nigger Boy' of the Russian 'АРАПЧОНОК' would cause difficulty in some countries; if the transliteration 'Arapchonok' was also not acceptable, it would be advisable to replace both translation and transliteration by a commercial synonym such as 'Congo,' 'Maroon Beauty,' etc.

Art. C. 16. To establish fixed points of departure for the determination of priority, an approved list or other publication, enumerating the cultivars of a group and compiled in accordance with this International Code of Nomenclature for Cultivated Plants, should be taken, whenever possible, as a starting point for the nomenclature of every group of cultivated plants.

(a) If an official registry exists, such a list will be one compiled or approved by the registrar.

(b) If no registry exists, a list, monograph or handbook may be adopted as the standard of nomenclature for a particular group by the International Committee on Horticultural Nomenclature and Registration after consulting appropriate individuals or societies concerned.

SECTION D

Formation and Use of Cultivar Names

Art. C. 17. From January 1, 1953 onwards the cultivar name of a newly described cultivar (i.e. a new or hitherto unnamed cultivar) should be a vernacular or "fancy" name (i.e. one in common language) and markedly different from a botanical epithet, e.g. 'Pygmy' not *pygmaeus*, or 'Prinz Handjery' not *Handjeryi*. It can be attached to either a scientific name or a common name, e.g. *Syringa vulgaris* 'Mont Blanc' or Lilac 'Mont Blanc.'

Art. C. 18. The cultivar name should begin with a capital letter and be distinguished typographically from a botanical epithet, preferably by enclosing it in quotation marks, e.g. *Sedum spectabile* 'Brilliant.'

Art. C. 19. When in the past a name of Latin form (technically a varietal epithet) has been generally used for a cultivar, this is not to be rejected but should be treated as a cultivar name. It is desirable that such a name should then be distinguished typographically from a botanical epithet, e.g. by enclosing it in quotation marks.

EXAMPLES. Thuja orientalis 'Elegantissima,' *Hibiscus syriacus* 'Totus albus,' *Magnolia* × *soulangiana* 'Lennei.'

Art. C. 20. The cultivar name remains unchanged even when legitimate changes take place in the generic name, e.g. through the union or division of genera or the use of an earlier generic name, unless the same cultivar name is already in use for another cultivar under the new generic name.

NOTE. The cultivar name does not form a technical nomenclatural combination with the generic, specific or varietal name to which it is appended. If the name of the producer (i.e. raiser or introducer) is cited, this remains the same even when the name preceding the cultivar name is changed.

EXAMPLE. Weigela 'Eva Rathke' (Rathke) becomes *Diervilla* 'Eva Rathke' (Rathke), when *Weigela* and *Diervilla* are treated as one genus under the name *Diervilla*.

Art. C. 21. Within the same genus or "hybrid genus" the same cultivar name is not to be used for more than one cultivar without permission of the official registrar of the group, this permission being granted only when it can be proved that the cultivar to which this name was first given is no longer in cultivation or already possesses a correct name and that no confusion will result. Thus the use of the name *Narcissus pseudonarcissus* 'Victoria' precludes the use of 'Victoria' as a cultivar name for a cultivar of any other species of *Narcissus* such as *Narcissus poeticus* 'Victoria.'

NOTE 1. It is advisable to avoid duplication of name among cultivars of closely related groups, such as Azaleas and Rhododendrons, which although separated generically by some plantsmen are placed by others in one genus, *Rhododendron*. Thus, when *Azalea* 'Harvest Moon' is transferred to the genus *Rhododendron*, the cultivar name 'Harvest Moon' cannot be retained for it because this name is already in use under *Rhododendron* for another cultivar.

NOTE 2. When permission has been granted for the use of an obsolete name to designate a new cultivar, this is to be recorded in the official register of the group. The revived name should be followed by the name of the raiser of the new cultivar.

Art. C. 22. The following practices should be observed in the coining of new cultivar names, but well-established names should not be altered to conform to them.

(a) So far as possible a cultivar name should consist of a single word; it should not exceed three words.

(b) Excessively long words or words difficult to pronounce should be avoided.

(c) For cultivars within the same genus or hybrid genus, names which are likely to be confused with one another should be avoided; the use of 'Alexander' should preclude the use of 'Alexandra' and 'Alexandria' and possibly 'Princess Alexandra' within the same genus or hybrid group.

(d) When personal names are used to designate cultivars, forms of address liable to be confused, especially through errors in printing, e.g. 'Mr.,' 'Mrs.,' 'Sr.' and 'Sra.,' should be avoided; 'Ellen Willmott' is preferable to 'Miss Willmott.'

(e) The use of abbreviations for personal and geographical names should be avoided; thus 'George Yeld' is preferable to 'G. Yeld' or 'Geo. Yeld' and 'Mount Kisco' to 'Mt. Kisco.'

(f) The articles "a" and "the" and their equivalents in other languages should be avoided except where linguistic custom dictates otherwise, e.g. 'Colonel' (not 'The Colonel'), 'Giant' (not 'The Giant'), but 'La Rochelle' (not 'Rochelle').

(g) The scientific or vernacular name of a genus or other group of plants should not be used as a cultivar name; names such as Carnation 'Pelargonium,' *Rosa* 'Camellia' and Plum 'Apricot' are to be avoided.

(h) The name of a living person should not be used as a cultivar name without his or her consent.

SECTION E
Names of Hybrids Originating in Cultivation

Art. C. 23. The *first* word of the name of a hybrid is a generic name, when the parents belong to the same genus, or the name of a "hybrid genus" when the parents belong to two or more genera. It conforms to the *International Code of Botanical Nomenclature* as far as generic names are concerned. Names of bigeneric or multigeneric hybrid groups are framed in accordance with Art. C. 25 (I.C.B.N., Art. 49 and H. 1–5).

The *last* part of the name of a hybrid originating or maintained in cultivation (see Art. C. 3) is a cultivar name (see Art. C. 5) applying to a single hybrid form and its direct descendants forming part of the same clone or line. The cultivar name is subject to all pertinent regulations in this *International Code of Nomenclature for Cultivated Plants*.

When the parentage is known or the cultivar belongs to a well-marked hybrid group, a formula indicating the parentage or a collective designation or group name for the group may be placed between the generic name and the cultivar name, thus forming the *second* part of the full name.

For the sake of brevity or when the parentage is unknown, uncertain or of complicated origin, the cultivar name may directly follow the generic name, e.g. *Iris* 'Ambassadeur.'

Art. C. 24. Regulations for the designation of hybrid groups of the same parentage by means of formulae or by collective names are to be found in Article C. 25 (I.C.B.N., Art. 49, H. 1–5) if these are in Latin form only. The following parallel regulations have been set up for use with groups to be designated primarily in common language. Additional provisions are included for those who wish particularly to use designations in Latin form.

(a) The formula consists of the names of the parents in alphabetical order separated by the multiplication sign.

EXAMPLE. Camellia japonica × *C. saluenensis.*

NOTE. Although it is the custom of some hybridizers to place the name of the female parent first in the formula, it is recommended that the method set forth in the Botanical Code be followed (Art. C. 25, I.C.B.N., Art. H. 1). The placing of the names of the parents of the hybrid in alphabetical order is advocated here because the formula covers all offspring of a cross, whichever way it is made, and because, for spontaneous hybrids and for the many hybrids whose history is obscure, nothing can be positively stated as to which was the female and which the male parent.

(b) When it seems useful or desirable, a collective name, preceded by the multiplication sign ×, may be substituted for the formula. This name may be either a word of Latin form or a phrase in common language preferably containing a word such as 'hybrids,' 'crosses' or their equivalents in other languages, which will make evident the collective usage of the phrase. All plants derived from a cross between the two or more species represented by one formula carry the same collective name, including subsequent generations from the first cross, crosses within these generations and back-crosses with either parent provided that they are distinguishable from the parents.

EXAMPLES. The collective name ***Camellia* × *williamsii*** covers all the hybrid forms, e.g. 'Donation,' 'J. C. Williams,' 'Mary Christian' and 'St. Ewe,' derived from ***C. japonica* × *C. saluenensis***. When the collective name is a phrase in common language, e.g. ***Lilium*** 'Bellingham Hybrids,' it is usually expedient to parenthesize the collective name, as in the name ***Lilium*** (Bellingham Hybrids) 'Shuksan'; here the cultivar name 'Shuksan' belongs to only one hybrid form (clone), which is thereby distinguished from other forms of the 'Bellingham Hybrids,' the parental formula of which is ***L. humboldtii*** var. ***ocellatum* × *L. pardalinum***.

(c) The use of the name of only one parent species to designate a hybrid group should be avoided. Such a phrase as "***Rhododendron fortunei*** hybrids" is permissible only when the other parents are unknown or uncertain or are themselves of complex, uncertain or unknown parentage, and the hybrid group has well-marked characters undoubtedly derived from the one species indicated.

(d) When the collective name is of Latin form, it is subject to the same rules of botanical nomenclature as those governing the names of species. It must therefore be published with a description or a diagnosis in Latin of a plant belonging to the hybrid group, or with a reference to a previously and effectively published description or diagnosis which must be in Latin if published after January 1, 1935; mention of the parents without such a description or reference does not validate the name. A dried specimen of the plant should be deposited in the herbarium of a botanical or horticultural institution which should be mentioned when publishing such a Latin name and description.

(e) If the collective name is not of Latin form, no Latin description is required. In general, cultivators are recommended *not* to give names of Latin form to plants originating in cultivation. Publication of names of hybrid groups in common language will follow the principles laid down for the publication of names of cultivars (Sect. C., Arts. 7–16).

(f) A word formed by combining the Latin epithets (or parts thereof) of the parent species may be used as a collective name but not as a cultivar name.

EXAMPLE. The name ***Lilium* × *sulphurgale*** is a collective name for hybrids of ***L. regale* × *L. sulphureum***.

(g) When a major hybrid group becomes separable into subsidiary groups, these groups may be given special designations

in common language, preferably including the word "group." They are to be regarded primarily as convenient headings for use in catalogues and handbooks. Grammatically they are formed in accordance with the language of the literature in which they are used and may thus be translated.

EXAMPLES. Tulipa × *gesneriana* (Darwin group) 'Bartigon'; *Dahlia* × *cultorum* (Cactus group) 'Julia Svedelius.'

NOTE ON PROCEDURE. When, for a new cross between two species, the describer has decided to publish a Latin name as a collective name, it is particularly important that either before or at the same time he should give a cultivar name to each particular form of the hybrid that he considers worth distinguishing, *even if there exists only one such form.* If this is not done then, later there will be a danger that horticulturally inferior forms of the same parentage will be placed under the same collective name, without any cultivar name being available to distinguish the original and possibly superior form. If, however, the original form of the cross is distinguished *from the time of its first publication* by a cultivar name, confusion with later forms, each of which would possess its own cultivar name, will be avoided. It is greatly to the advantage of the first producer to follow this procedure.

EXAMPLES. The name *Viburnum* × *bodnantense* covers all hybrids of *V. fragrans* × *V. grandiflorum*, though based on a selected form raised at Bodnant, which has been given the cultivar name 'Dawn' to distinguish it from other forms of the same parentage. Similarly the name *Eucryphia* × *intermedia* covers all hybrids of *E. glutinosa* × *E. lucida* but the name *E.* × *intermedia* 'Rostrevor' is to be used only for vegetative descendants of the hybrid raised at Rostrevor.

SECTION F

Names of Latin Form applied to Hybrids in General.

Art. C. 25. General rules for the naming of hybrids are provided in the *International Code of Botanical Nomenclature* (Appendix II), if these names are to be in Latin form.

For convenience these rules are here reproduced.

I.C.B.N. Art. H. 1. Hybrids or putative hybrids between two species of the same genus are designated by a formula and, whenever it seems useful or necessary, by a name.

The formula consists of the specific epithets of the two parents in alphabetical order connected by the multiplication sign ×. When the hybrid is of known experimental origin, the formula may be made more precise by the addition of the sign ♀ to the epithet of the parent producing the female gamete and ♂ to the epithet of the parent producing the male gamete.

The name, which is subject to the same rules as names of species, is distinguished from the latter by the multiplication sign × before the binary ("specific") epithet.

Where binary ("specific") names of Latin form are used for hybrids, all offspring of crossings between individuals of the same parent species receive the same binary name.

EXAMPLES. Salix × *capreola* (= *Salix aurita* × *S. caprea*) ; *Digitalis lutea* ♀ × *D. purpurea* ♂.

NOTE 1. When polymorphic parental species are involved and if infraspecific taxa are recognized in them, greater precision may be achieved by the use of formulae than by giving the hybrids "specific" names.

[*SPECIAL NOTE.* At the Stockholm Congress it was agreed that the term "taxon," plural "taxa," as used above, can mean any taxonomic unit or group of plants which can belong to any category, such as family, genus, species, variety, etc.; it is intended that it replace the longer phrase "taxonomic group" and such taxonomically indefinable words as "entity" etc. Reasons for placing the names of the parents of a hybrid in alphabetical order may be found in the note under Art. C. 24 (a).]

NOTE 2. Designations consisting of the specific epithets of the parents combined in unaltered form by a hyphen or with the ending of only one epithet changed or consisting of the specific epithet of one parent combined with the generic name of the other with or without change of ending are considered as formulae and not as true epithets.

EXAMPLES. The designation *Potentilla atrosanguinea-formosa* published by Maund is considered as a formula meaning *Potentilla atrosanguinea* × *P. formosa*. The designation *Potentilla tormentillo-formosa* published by Maund is considered as a formula *Potentilla formosa* × *Tormentilla reptans*. Similarly *Verbascum nigro-lychnitis* Schiede, Pl. Hybr. 40 (1825) is considered as a formula, *Verbascum lychnitis* × *V. nigrum;* the correct binary name for this hybrid is *Verbascum* × *schiedeanum* Koch.

I.C.B.N. Art. H. 2. Hybrids or putative hybrids between infraspecific taxa of the same species may be designated by a formula and, whenever it seems useful or necessary, by a name of the same taxonomic rank as the parents or, if these are of different rank, then that of the higher ranking parent. In the formula the order of the epithets and the use of the signs ♀ and ♂ should follow the procedure set down in Art. H. 1.

NOTE. In general, greater precision will be achieved with less danger of confusion if formulae rather than names are used for such hybrids. *EXAMPLE. Lilium davidii* var. *davimottiae* (= *L. davidii* var. *davidii* × *L. davidii* var. *willmottiae*).

I.C.B.N. Art. H. 3. Bigeneric hybrids (i.e. hybrids between species of two genera) are designated by a formula and, whenever it seems useful or necessary, by a name.

The formula consists of the names of the two parents connected by the multiplication sign × as in Art. H. 1.

The name consists of a new "generic" name, usually formed by an euphonious combination of parts of the names of the two parent genera, and a binary ("specific") epithet. The binary epithet of an intergeneric hybrid must not be placed under the name of either of the parent genera.

All hybrids between the same two genera bear the same "generic" name, this to be preceded by the multiplication sign ×.

EXAMPLES. × *Asplenosorus* (= *Asplenium* × *Camptosorus*); × *Asplenosorus ebenoides* (= *Asplenium platyneuron* × *Camptosorus rhizophyllus*), not *Asplenium* × *ebenoides;* × *Heucherella* (= *Heuchera* × *Tiarella*) ; × *Heucherella tiarelloides* (= *Heuchera* × *brizoides* × *Tiarella cordifolia*), not *Heuchera* × *tiarelloides;* × *Mahoberberis* (= *Berberis* × *Mahonia*).

NOTE. "Hybrid subgenera" and "hybrid sections" may be named in the same way.

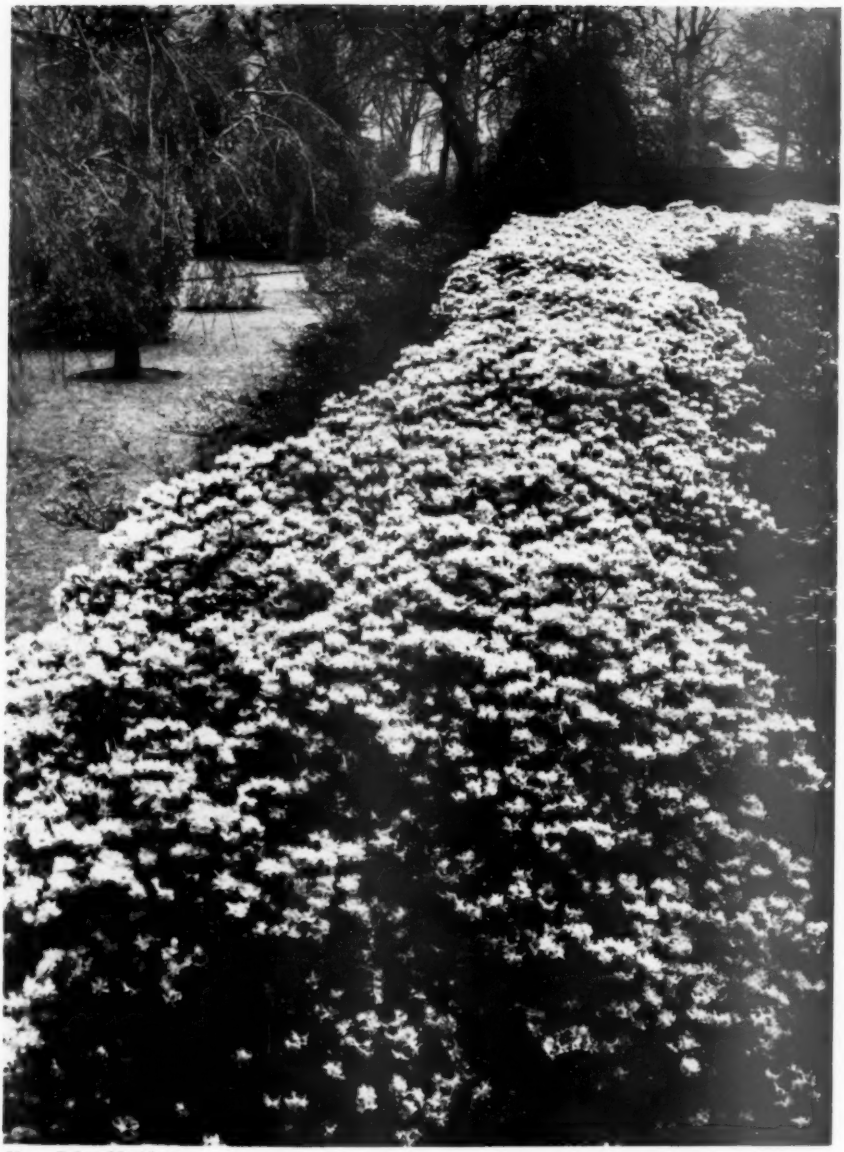
EXAMPLE. Iris subgenus × *Regeliocyclus,* comprising the hybrids between species belonging to subgenus *Regelia* and subgenus *Oncocyclus.*

I.C.B.N. Art. H. 4. Ternary hybrids, or those of a higher order, are designated like ordinary hybrids by a formula and, whenever it seems

Photo, J. E. Downward

UNUSUAL AND ORNAMENTAL PLANTS FOR HEDGES

FIG. 67—*Rosa xanthina* var. *spontanea* ('Canary Bird') (See p. 153)



Photo, Robert M. Adam

UNUSUAL AND ORNAMENTAL PLANTS FOR HEDGES

FIG. 68—*Rhododendron praecox* as a hedge flowering in February in the Royal Botanic Garden, Edinburgh (See p. 153)

Photo, J. E. Downward

UNUSUAL AND ORNAMENTAL PLANTS FOR HEDGES

FIG. 69—*Poncirus trifoliata* (*Aegle sepiaria*) (See p. 156)

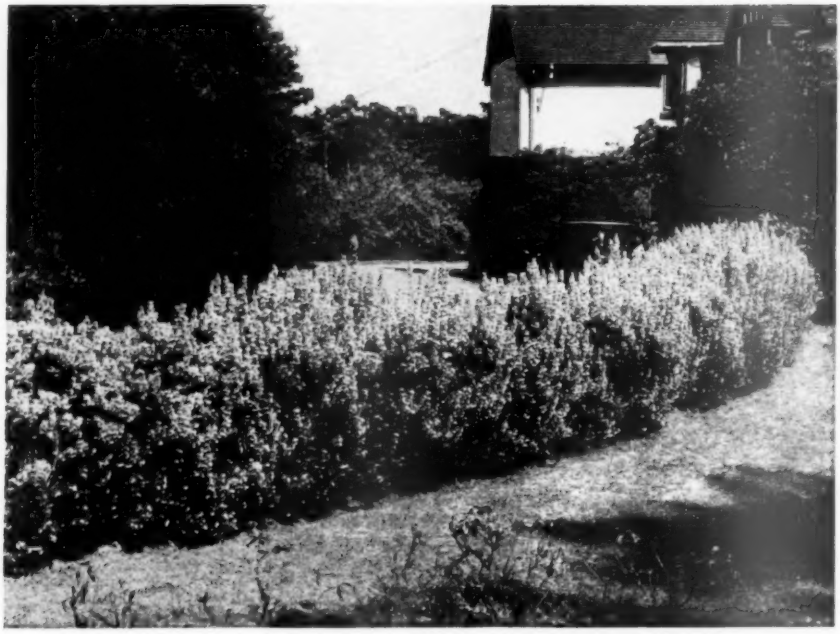


FIG. 70—A Rosemary hedge, *Rosmarinus officinalis* (See p. 153)

UNUSUAL AND ORNAMENTAL PLANTS FOR HEDGES

Photos, J. E. Downward

FIG. 71—*Cotoneaster lactea* (See p. 152)

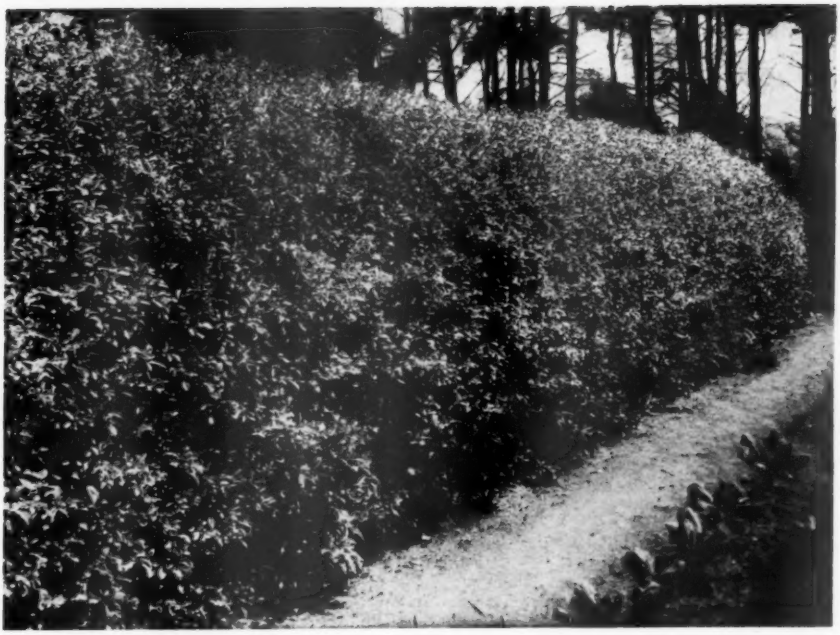


FIG. 72—*Chaenomeles japonica* (*Cydonia Mauliei*) (See p. 153)

Photot, J. E. Downward

FIG. 73—A Scots Pine hedge, *Pinus sylvestris* (See p. 155)

UNUSUAL AND ORNAMENTAL PLANTS FOR HEDGES

FIG. 74—*Senecio laxifolius* (See p. 156)

Photo, A. T. Johnson

FIG. 75—*Dahlia Merckii* (See p. 174)

NOTES FROM FELLOWS

Photo, Dr. A. M. Amsler

FIG. 76—Plants of dwarf Phlox rooted into coal ashes (See p. 175)

Photo, E. & D. Gibbs

FIG. 77—The statue of Pan presented to The Royal Horticultural Society by MR. MURRAY ADAMS-ACTON and now installed in the entrance hall of the New Hall (See p. 175)

useful or necessary, by a binary name. Such as are trigeneric or multigeneric may be given new generic names formed by a combination of parts of the names of the parent genera; usually, however, multigeneric hybrid groups combining three or more genera receive a conventional name consisting of the name of a person eminent as a collector, grower or student of the group, to which is added the termination *-ara*; no such name may exceed eight syllables.

EXAMPLE 1. *Salix* × *straehleri* (= *Salix aurita* × *S. cinerea* × *S. repens* or alternatively *Salix* (*aurita* × *repens*) × *S. cinerea*).
EXAMPLE 2. × *Sanderara* (= *Brassia* × *Cochlioda* × *Odontoglossum*); × *Potinara* (= *Brassavola* × *Cattleya* × *Laelia* × *Sophronitis*). Correct validly published compounds such as × *Dialaeliocattleya* (composed of parts of the generic names *Cattleya*, *Diacrium* and *Laelia*) must, however, be retained.

I.C.B.N. Art. H. 5. When different hybrid forms of the same parentage (pleomorphic hybrids, combinations between different forms of a collective species, segregates, backcrosses) are united in a collective taxon, the subdivisions are classed under the binary name applied to the hybrid population or group like the subdivisions of a species under the binary name of the species. These forms are recognized as nothomorphs; when desirable a nothomorph may be designated by an epithet preceded by the binary name of the hybrid group and the term "nothomorph" (*nothomorpha*, abbreviated as *nm.*).

[*SPECIAL NOTE. nothomorpha*—a term derived from the Greek νόθος and μορφή, meaning "hybrid form," and applied to any hybrid form, whether F_1, segregate or backcross.]
EXAMPLES. Mentha × *niliaca* nm. *lamarckii* (= a form of the pleomorphic hybrid *Mentha* × *niliaca* = *M. longifolia* × *M. rotundifolia*); *Ulmus* × *hollandica* nm. *hollandica* and nm. *vegeta* (= forms of *Ulmus* × *hollandica* = *U. carpinifolia* × *U. glabra*).

I.C.B.N. Art. 49. For purposes of valid publication names in Latin form given to hybrids, including nothomorphs, are subject to the same rules as those of non-hybrid taxa of corresponding ranks.

NOTE. The parentage so far as it is known should be indicated.

SECTION G

Names of Bud-mutants ("Sports") and Re-selected and Improved Strains

Art. C. 26. In naming a bud-mutant ("sport") of a recognized cultivar, the name selected should so far as possible identify the mutant with the parent cultivar, if the season of flowering or ripening of the fruit or period of use has not been changed.

EXAMPLE. Apple 'Red Rome' was derived from a bud-mutation of 'Rome Beauty' and is identical with it in all characteristics except that the fruit is red all over instead of striped.

Art. C. 27. When a strain becomes, through continuous selection, so distinct from the original that it can be regarded as a new cultivar, it should be given a concise new name. When, however, selection has not resulted in such divergence, the reselected strain should keep the name

of the original cultivar, followed by the name of the selector or some other convenient designation.

EXAMPLES. Broccoli 'De Cicco,' derived from Broccoli 'Calabrese,' is available a full week earlier and has somewhat different cultural requirements. Cabbage 'Wisconsin All Seasons,' highly resistant to the diseases "yellows" and cabbage mosaic, is an otherwise similar selection from the non-resistant 'All Seasons.' Excessively long names resulting from repeated re-selections, such as Onion 'Giant Yellow Zittau Nordre Munkegaard I,' should be avoided.

SECTION H
Special Categories

Art. C. 28. Experimental horticulture and botany may need to recognize various special categories outside the requirements of the non-specialist. These categories are considered in the following regulations. In general their nomenclature is governed by the regulations above, when applicable.

Art. C. 29. In "grafted" or "budded" plants, when it is desired to indicate the materials of which such plants are made up, the name of the upper species, cultivar, clone, etc. (i.e. the scion), precedes the name of the next lower (i.e. the stock), the names being separated by a slanting line or lines.

EXAMPLES. Viburnum carlesii/*V. lantana; Syringa vulgaris* cl. 'Decaisne'/*Ligustrum ovalifolium;* Rose 'Betty Uprichard'/*Rosa multiflora;* Apple 'Grimes Golden'/'Malling 2.' In "double-worked" or "triple-worked" material the same sequence would be followed.

Art. C. 30. For greater precision in the nomenclature of cultivated plants the following categories may be recognized:

(a) The *line* (Latin *linea*, abbreviated as *ln.*): a sexually reproductive and uniform-appearing group propagated entirely by means of seed, its stability maintained by selection (this known as "roguing the line" by practical plantsmen). The epithet would be preceded by the term "line." The "line" usually is equivalent in rank to the category of "cultivar."

EXAMPLE. Petunia ln. 'Rosy Morn.'

(b) The *clone*: essentially uniform material derived from a single individual and propagated entirely by vegetative means, as by cuttings, divisions, grafts, etc. The epithet would be preceded by the term "clone" (abbreviated as *cl.*) or indicated by the symbol ⚘. This category is essentially equivalent to "cultivar" and replaces it in horticultural groups where nomenclatural precision is essential (see also this Article, paragraph (f)).

EXAMPLES. Picea pungens var. *glauca* cl. 'R. H. Montgomery'; as expediency dictates, *Syringa vulgaris* cl. 'Decaisne' may also be designated as Lilac cl. 'Decaisne' or Lilac ⚘ 'Decaisne' or 'Decaisne' ⚘.

(c) The *hybrid-group* (Latin *grex hybrida*, abbreviated as *gh.*): a group of hybrids originating from the same parents or series of parents but whose individuals vary in appearance; the group would be delimited by the potential variation inherent

in the parental stocks. This category is on the "specific" level (see Art. C. 5 (2) and Art. C. 24 (b)).

EXAMPLE. The 'Hardy Ghent hybrid azaleas' are sometimes listed as *Rh.* ×*gandavense* (said to be derived from *Rhododendron calendulaceum* × *Rh. flavum* × *Rh. nudiflorum*); where greater precision is desired and to indicate that the group is not a simple one with few variants, this might be listed as *Rhododendron* gh. *gandavense*. A particular clone of this group would be designated, e.g., as *Rhododendron* gh. *gandavense* cl. 'Pallas.'

(d) The *line-hybrid* (Latin *linea hybrida*, abbreviated as *lh.*): a predictably uniform group derived by repetitive hybridization from a series of two or more constantly maintained breeding stocks, these parental "lines" being maintained either by continued inbreeding or as clones. The epithet, or identifying symbol or number, could be prefixed by the hyphenated words "line-hybrid" or the abbreviation "lh." This category is essentially on the cultivar level.

EXAMPLE. This is the standard practice in the "hybrid seed corn" industry—e.g. 'United States Department of Agriculture, hybrid seed corn No. 13' (usually abbreviated as 'hybrid corn, US–13') which, for greater precision in formal, international literature where the word "corn" has various applications, might be listed as *Zea mays* lh. 'US–13'.*

(e) The *convariety* (Latin *convarietas*, abbreviated as *conv.*); a group of closely allied cultivars, somewhat analogous to the subspecies.

EXAMPLE. Cucurbita pepo conv. *citrullina*, which includes the cultivars (lines) 'Dahlemer Dauerkurbis,' 'Long Cream,' 'Mogono,' etc.†

NOTE. The category of convariety has special use in the systematics of cultivated plants where the category of "subspecies," with its geographic connotations in modern taxonomy, has little pertinence, and where the category of "variety" is devoid of systematic precision.

(f) Appendix II, Rec. H. 5A of the *International Code of Botanical Nomenclature* also has pertinence here and should be consulted. It is here repeated for greater convenience. The *apomict* is a plant which reproduces by means of seed, the embryos of which are produced in various ways, but without fertilization. Apomixy is relatively common in such important families as the Rosaceae, Gramineae, etc.

I.C.B.N. App. II *Rec.* H. 5A. Taxa which are apomicts may, if desired, be designated as such in the following manner:

(1) if they are considered of specific rank by the interpolation of the abbreviation *ap.* between the generic name and the epithet.
(2) if they are considered as of infraspecific rank by the interpolation of the abbreviation *ap.* between the categoric term and the infraspecific epithet.

Taxa which are clones may, if desired, be designated as such by the term 'clone' (abbreviated as *cl.*) or the symbol ⚘. The placing of the categoric term will follow the procedure suggested for the apomict.

[*SPECIAL NOTE.* By extension, the instructions for the placing of the abbreviation *ap.* as outlined in Rec. H. 5A, might, where advisable,

* This method also is an increasingly common practice in the production of ornamental plants—W. H. C.

† Probably the numerous kinds of yellow-flowered, hard-shelled ornamental gourds would also comprise a convariety of this species—W. H. C.

also be applied to cultivar names. These would follow the system outlined for the clone given above (Art. C. 30 (b)).]

Art. C. 31. Polyploid or genetically differentiated races may be named or their cytological condition indicated by an appropriate symbol.

EXAMPLES. Phlox drummondii 'Tetra Red'; Salsify 'Mammouth' (4n).

Art. C. 32. Graft chimaeras (sometimes called "graft hybrids") are designated by a formula and, where it seems useful or necessary, by a name.

(a) The formula consists of the names of the two taxonomic groups (taxa) from which the tissues of the chimaera were derived, in alphabetical order and connected by the addition sign +.

EXAMPLES. Cydonia oblonga + *Pyrus communis; Cytisus purpureus* + *Laburnum anagyroides; Syringa* × *chinensis* + *S. vulgaris.*

(b) When the components belong to different genera, the name consists of a new "generic" name formed by a combination of the names of the component genera, preceded by the sign + and followed by an epithet. This "generic" name should not be the same as the "generic" name of hybrids between the same genera, nor should the epithet of a chimaera be the same as that used for a hybrid between the same species as the components of the chimaera.

EXAMPLES. +*Crataegomespilus dardarii* = *Crataegus monogyna* + *Mespilus germanica* but × *Crataemespilus gillotii* = *Crataegus monogyna* × *Mespilus germanica; Solanum* +*tubingense* = *Solanum lycopersicum* + *S. nigrum* or, if the components are considered generically distinct, + *Lycosolanum tubingense* = *Lycopersicon esculentum* + *Solanum nigrum.*

(c) When the components belong to the same genus, the name consists of the generic name followed by the sign + and an epithet.

EXAMPLE. Syringa +*correlata* = *Syringa* ×*chinensis* + *S. vulgaris.*

(d) The same two components may build a chimaera in more than one way, so that morphologically and histologically different forms may be distinguished. These forms should be united under the same formula or binary ("specific") name; when it is desirable to give them special designations they should be recognized as mixomorphs and designated by epithets in the same manner as forms of species or as cultivars with names in the vernacular. This epithet preceded by the term "mixomorph" (*mixomorpha*, abbreviated as *mx.*) may be placed after the binary name or after a formula.

EXAMPLES. + *Crataegomespilus dardarii* mx. 'Jules d'Asnières'; *Solanum* +*tubingense* mx. *koelreuterianum.*

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NOTES FROM FELLOWS

Solanum Seaforthianum

THIS very charming Brazilian climber is seldom seen in private collections of cool house climbers today, yet its ease of culture and abundance of flowers make it a worthy member of the choicest assembly. Planted out, it will soon reach 20 feet, but restricted to a pot it will flower continuously from 3 feet upwards.

We find it demands no special treatment, but cut it down to within 2 feet of the ground every March. The drooping panicles of purple to blue flowers, swinging happily clear of the pale green foliage, are enchanting and continuous from April until the time the plant is cut down. It has withstood temperatures down to forty degrees without apparent resentment, but does appreciate plenty of water during the summer months.

Seedlings appear occasionally around the plant and consequently no other method of propagation appears necessary. Why bother when Nature will do it for you is always sound advice. White Fly will attack it sometimes, but I have noticed no other pest on it.

Unlike its better known relative *S. Wendlandii*, it is unarmed, and neither the foliage nor the flowers are so large, but here at any rate it is certainly more floriferous.

I do feel that this climber merits that much over-worked phrase—"A plant for the connoisseur."

L. MAURICE MASON

King's Lynn,
Norfolk.

Dahlia Merckii

To devotees of garden-made Dahlias the subject of this note would not be regarded with much enthusiasm. On the other hand, to many who are interested in uncommon plants—especially plants of the wild—*Dahlia Merckii* will appeal on account of its refinement and beauty—and its hardiness. In our light freely drained soil we have had it for over thirty years, and it has never been other than care-free and well to do. Even the sub-zero frosts of six years ago did not seriously affect it and no winter covering of any sort is provided.

D. Merckii is much after the pattern of any other Dahlia in foliage and habit, but the deeply cut leaves are a pale lettuce-green, and the stems do not often exceed 2 feet. These stems are stiff enough to do without stakes, yet the plant, with its drooping foliage and airy poise, is the last word in elegance. Its dainty grace is still more marked when, from late summer to mid-October, the flowers, nodding on slender stems just clear of the leaves, are being produced in succession. Rather less than 2 inches across, these flowers, consisting of about nine egg-shaped, slightly "dished," petals with an eye of maroon and gold, may vary in tint. Thus, while those of our old stock plant are a clear shell-pink with just a touch of lilac in the make-up, those seed-raised may drift into darker hues, even to a rather dismal mauve. Though we have raised a good proportion true to the former description, the only certain method of increase appears to be division or the means usually employed with other Dahlias. *D. Merckii* seems to have been introduced from its native Mexico about 100 years ago. Its place in the garden is, of course, in the shrub, or mixed, border, where its fragile charm will not be subject to the competition of more spectacular companions. *Bidens dahlioides*, a more recent introduction, is sometimes sent out as *Dahlia Merckii*. It bears a close resemblance to the latter, but is more variable in colour and, in our experience, inferior in garden value (Fig. 75).

A. T. JOHNSON

Conway,
N. Wales.

Coal Ashes as a Growing Medium

Some years ago MR. CLARENCE ELLIOTT started a correspondence in the Gardening Press on the above subject and I also contributed my mite.

MR. ELLIOTT told us that *Gentiana verna*, which is not the easiest of subjects, waxed very strong when planted out in ashes. My own experiments were chiefly concerned with Lilies; in one case I planted a strong bulb of *Lilium* × *centigale* in a ten-gallon oil drum of pure ashes and clinkers, the coarser stuff being placed low down for drainage. The first season I had a very fine spike some 5 feet high and the next year there were two or three, not so tall, but bearing a goodly number of flowers. On both occasions the results were good enough for me to put them into the Co-operative Lily group for amateurs.

Since then the planting of this Lily has begun to go back, so it has

been dug up and planted out into the garden. Presumably all the nutriment, such as it was, had been extracted from the ashes, but for the first two seasons this Lily was bigger and stronger than others of the same size and kind which I had planted in the flower beds at the same time. CANON ROLLO MEYER told me of a bulb of *Lilium regale*, which had been dumped or laid in an ash heap in his former garden. It was forgotten and untended, but ran up to 6 feet and bore twenty flowers. Figure 76 shows how plant roots can revel in coal ash; these three little plants were cuttings or offsets of some of BOOTHMAN's dwarf Phloxes of which *P. Douglasii* is one parent.

Quite a number were raised and potted up, the best were carefully wintered in a frame but the three here depicted being weak specimens were sunk in an out-door ash bed and completely forgotten until the following summer, when I was surprised to see how much stronger they were than any frame plants.

It was quite impossible to lift them without using a full-sized garden fork and even then much of the root system broke away owing to the weight of the adherent ashes. The vigour of these plants was easily explained, unlimited root-run and perfect drainage, much the same conditions as those of a scree-bed composed of chips or gravel. Might I suggest to those unfortunate town-dwellers who have only a yard, or window sill and no soil, to invest in a few old oil drums or boxes.

Even with the present-day shortage it would be possible to collect enough ashes for this purpose and perhaps the more adventurous might try very small quantities of the fertilizers now obtainable for soil-less cultivation.

MAURICE AMSLER

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Kent.

SCULPTURE IN ENGLISH GARDENS WITH SOME NOTES ON A STATUE OF PAN

Murray Adams-Acton,
F.Inst.R.A., F.F.A.S., Hist. Inst. of France

WHEN brevity is essential I find it difficult to reply to the request for information regarding the figure of Pan, now safely upon his pedestal in our New Hall.

There are so many different categories of sculpture, i.e. monumental—like the cenotaph, ecclesiastical, such as a mediaeval crusader, architectural sculpture, often purely decorative, and that which has been produced specifically for garden ornamentation such as this figure of Pan (Fig. 77), which has definite characteristics affined to the landscape and gardens and nowhere else, a link, as it were, between art and nature.

Its inspiration needs no explanation. It is in every way alive. As gay as the sunshine, allied to flowers, ferns, trees and birds when in full song at the return of spring. It will, I think, and I sincerely hope, be admired, because of its realistic rendering of a youthful form in

combination with craftsmanship of an advanced order. There is nothing remote or obscure to bother about; no hidden problem, demanding deep and penetrating vision.

It is, obviously, the legacy of an artist well versed in the cutting of decorative ornament, as well as a keen student of anatomy, who toiled *con amore* to demonstrate, not only his technical ability, but the love for his job. Stylistically it recalls similar carving introducing the human figure within some of our great classical mansions of the Georgian era, when eminent sculptors and painters lent their services to architects and decorators, and, so far as I know, it is the only figure of its kind produced in timber. Garden sculpture was either of stone, cast in lead or in Roman cement.

I will direct attention to only one feature which may escape notice. The boy's arms are raised, his fingers touch the top of a cornucopia (the lower part of which rests between his shoulders) from which the contents have fallen upon his head and elsewhere. It will be seen that the top of the cornucopia is flat. Was this to provide a base for a vase, or, more likely, a rustic basket of sorts, to contain natural flowers, intended to trail downwards and mingle with those which are carved? It looks like it.

I like this interpretation of Pan, because not only is it of English provenance, but youthful. The ancients depicted him as a rough, scraggy creature with a puck-nose, horns and a beard and short hairy legs, the reverse, in fact, of our conception of the mythical son of Hermes, god of the hills and valleys, garlanded with his attribute of vine leaves, who wandered in the solitude of the forests attended by mountain nymphs, imps, elves and satyrs, or sat in front of his grotto piping softly upon the pipes he devised.

I am of the opinion that it must have been produced as the central object in a grotto. Perhaps over water in an orangery, though I doubt it. Anyway it comes from Gwydir Castle in Wales, where originally it was somewhere under cover, because it could never have survived for 200 years in the open. Grottos were fashionable features at the time of the Hanoverian succession. Probably the most remarkable of its kind still extant is at Stourhead in Wiltshire, which was excavated about 1745.

Surely it must be regretted by all who like gardens that we have never established an art of garden sculpture of our own? What is more distressing still is that at the present time our standard has fallen lower than our tradition at any time in history. There is a widespread aversion to garden sculpture but I can only point out that all the great gardens throughout Europe through the ages have contained sculpture, from the mediaeval fountains in France and Flanders, through the epoch of the Renaissance to the advent of Baroque, when, I think, garden art culminated in its most elegant expression. The paintings of FRAGONARD, HUBERT ROBERT and others, all artists who were inspired by gardens and loved the landscape, would be dull if devoid of their temples, cascades and similar features. All the same, and this is of immense importance, little requires the exercise of greater judgment and restraint, especially unity of scale, than the introduction of architectural ornament and sculpture in an outdoor setting; there is nothing worse in the world than bad art in a garden where it insults nature.

Very little sculpture of fine quality was produced in England specifically for gardens in the eighteenth century. During the whole of last century we relied, more or less, upon what we inherited adding only casts from the classic—such as the Belvedere Apollo, dying gladiators, fragments from Roman sepulchral monuments and other impedimenta, brought here from Italy by tourists, most of which was carved in marble too soft to last in our English climate. A few additions, such as CANOVA's "Dancing Girl" and others, came along later, but they were not originally produced for a setting in the open.

What since then? We survived the deluge of terra-cotta pots and balustrades of the Great Exhibition which descended in quantity, although the work of one man, by name CODE, is worthy of recognition. CODE's work for Doulton's at Lambeth was scholarly and well above the average. Then came the GERTRUDE JEKYLL epoch of rebellion against formality which, in its way, marked a healthy advance. All the same, informality is an easy way out. Anyway, she left the imprint of artistic perception, combining botanical erudition, upon garden activity of her time; furthermore, she had the right idea about trees. "Trees" she wrote, "are as the colours upon an artist's pallet. It depends upon how those colours are used whether a picture is produced." Let us remember that the Victorians gave us our trees, planted as seedlings, now full grown in our gardens everywhere and in Hyde Park.

Twenty or thirty years ago quite a few very fine figures, cast from the French châteaux by a firm not distant from Paris, SOEUL GILBERT, were purchased by one or two English people. Some of these figures are of heroic size, such as GOUJON's lovely Diana, and many of the important vases from Versailles and elsewhere, which when erected, mitigated the severity of late classical buildings where a garden had never been planned or developed. Since then little seems to have happened.

We have discovered crazy-paving. Apart from that we seem to have been overwhelmed by a great avalanche of rocks, around which we dig pools. If we permit the introduction of ornament it matures quite often in the form of a concrete bird-bath, a few gnomes or a Donald Duck.

Distaste for sculpture has arisen in recent years because of so much third-rate ornamentation, often in plaster, which has been placed out-of-doors and invariably painted white. I often observe important gardens disfigured by so-called "works of art," inappropriate for any environment except inside a dustbin! Another factor which has turned people with refined taste against statuary in the open is the frenzied litter of white marble scattered in our *Père Lachaise* cemeteries which produce a shudder at the thought of death!

The purpose of these remarks is to point out that we are not barren of creative talent in England and that one art helps another art. There are many figures exhibited at the Royal Academy annually, ideally suitable for natural surroundings which never find their way into our gardens! Sculpture by the Swedish artist CARL MILLES demonstrates that the desire to possess suitable objects is still strong, while his work has to no small extent influenced the development of continental gardens elsewhere.

SOME ASPECTS IN THE CULTURAL CONTROL OF WEEDS

Robert Adams

IN the past few years there has been a marked increase in the number of enquiries received at the Society's Gardens on the subject of weed control. No doubt one reason for this increased interest is the large amount of additional land that has been brought under cultivation in the last decade; another is the shortage and the expense of labour required to exercise effectively a reasonable control of unwanted plants. A further point with, perhaps, an indirect bearing on the question, is the large-scale use of chemical herbicides. This method is often considered to be the immediate answer to all problems of weed control. As a result the user excuses himself the task of considering both the habits of the weeds to be destroyed and the cultural requirements of the crop grown which may, sometimes, be advantageously incorporated in his control methods.

An example of carefully planned cultural control was given by MR. F. A. SECRETT, in an address to the Royal Society of Arts (1). When he first started his farm at Milford MR. SECRETT found the chief weeds to be Spurrey (*Spergula arvensis*) and, among the perennials, the deep-rooted Horse Tail (*Equisetum arvense*). Immediately he applied large quantities of organic matter to increase soil fertility and, under his cropping plan, these weeds gradually died out, to be replaced by Groundsel (*Senecio vulgaris*), Annual Meadow Grass (*Poa annua*) and Chickweed (*Stellaria media*). Later, as a result of the sound cultural methods employed, a very high standard of fertility was reached and the weeds mentioned were, in turn, replaced by the dwarf Annual Nettle (*Urtica urens*). By these purely cultural practices MR. SECRETT has finally eliminated the perennial *Equisetum* and now has the comparatively easy task of controlling a shallow-rooting annual.

In quoting this example it is not intended in any way to decry chemical means of control, but it must be emphasized that chemicals are seldom successful in eradicating a weed unless the crop under cultivation and the habits of the plants to be destroyed are fully understood. Chemicals are not the whole answer to weed eradication, although, without them our means of controlling many weeds would be totally inadequate. Briefly, the answer to the problem of weed control is a combination of really good husbandry and the judicious use of chemicals.

A "weed" may be defined as a plant which persists in growing where it is not wanted. By definition therefore, weeds are, in general, well equipped to compete with the crops in which they grow, but the particular reasons for their success vary considerably. A feature of many weeds is that they are able to regenerate damaged parts. Thus, the crown of the Dandelion (*Taraxacum officinale*) if removed, will quickly send out new shoots. In others, such as the Annual Nettle, the flowers

are small and inconspicuous and the young plant has often developed and scattered a crop of seeds before the presence of the parent plant is noticed. Perennials, on the other hand, although prevented from seeding, may freely propagate themselves by sending out long rootstocks which are often scattered by careless cultivation and distributed over a large area.

In exercising a control of weeds, the importance of seeding cannot be too strongly emphasized. It is well known that certain weeds produce enormous quantities of seeds and the common wayside flower, Jack-by-the-Hedge (*Alliaria officinalis*) often scatters, from a single plant, up to half a million seeds (2). Other plants produce even larger numbers although none can equal the fertility of members of the family *Orchidaceae* in which for example, the Swan Orchid (*Cycnoches chlorochilon*) is estimated to produce 4,000,000 seeds in one fruit (3). The results of these facts are illustrated in the old adage that one year's seeding is seven years weeding and is confirmed by the point that, although a number of seeds will germinate in the first season, a large proportion will remain dormant. This dormancy, in some cases, may be part of the natural cycle of development or may be induced by the deep burial of seed in the soil, thus denying it the optimum amount of air, moisture and warmth required for germination. Under such unfavourable conditions seed of Ox-eye Daisy (*Chrysanthemum Leucanthemum*) may remain dormant for 20 years and will, thereby, account for the appearance of the weed in large numbers on newly ploughed ground which previously had been down to ley. Another example of this phenomenon may be found in the occurrence of the Flanders Poppy (*Papaver Rhoeas*) under similar circumstances and, again, in the strange appearance of the Henbane (*Hyoscyamus niger*) on bombed sites in London.

Bearing these facts in mind we find a clue to the successful control of many annual weeds like Shepherd's Purse (*Capsella Bursa-pastoris*), Chickweed and the ubiquitous Groundsel. A good degree of elimination can be obtained with such plants by lightly cultivating the ground in the early autumn so that the dormant seeds are brought to the surface. After a quick germination, the resulting seedlings will soon be proved insufficiently hardy to survive the first early frosts. At the same time, old plants should be systematically destroyed, otherwise many will survive in mild winters with a little protection and start seeding quite freely in the first few weeks of spring. The Annual Meadow Grass for example, can be found flowering long before the first of its previous year's seeds germinate. Early in the season a further crop of seedlings can be destroyed by lightly harrowing the ground; seeds will again lose their dormancy and the young plants may be destroyed easily before the general planting programme is carried out.

The problem of control for annual weeds and the simple cultural methods used are relatively easy when compared with the difficulties of eliminating the often deep-rooted perennials. These plants often demand the maximum amount of time, labour and careful consideration if a reasonable control is to be obtained. Generally, annual digging will not eradicate perennials, for although these weeds may be deeply buried a considerable amount of regeneration from the underground

stems will result, apart from vegetative reproduction of severed roots.

When cultivating virgin or heavily infested land it is advised to remove as many roots as possible and burn any Ground Elder (*Aegopodium Podagraria*), Lesser Bindweed (*Convolvulus arvensis*) and Horse Tail. Couch Grass (*Agropyrum repens*), on the other hand, often warrants composting as it occurs naturally on poor, thin soils to which the addition of organic matter at a later date will be particularly useful. After preliminary digging it is generally found to be a good plan to grow Potatoes on medium or heavy loams. Any weeds appearing will be checked by the considerable amount of cultivation required for planting, earthing-up and eventual harvesting of the crop. Further the Potato is naturally a heavy feeder and will compete favourably with most weeds for available soil moisture and in area of foliage. The absurdity of planting this crop on any and every soil cannot, however, be too strongly emphasized. On light, poor or sandy soils the Potato will inevitably fail and the perennial weeds be allowed a further season of almost undisturbed growth. In any case, before planting it will be found advisable to apply a dressing of balanced fertilizer consisting of 2 parts of super-phosphate, 1 part of sulphate of potash and 1 part of sulphate of ammonia at a rate of 1½ lb. per 30 ft. row. A further dressing, using sulphate of ammonia at ¼ lb. for the same area may be applied if the growth is weak just before earthing up.

In considering a similar scheme for poor, light soils it will be noticed that different weeds occur from those generally found on heavy loams. Chief amongst them is usually the tough, persistent Horse Tail. This plant, which must rank as one of the worst of garden weeds, thrives in a wide range of soils and may be found on wet, waterlogged sites or growing with equal profusion in the driest of situations. In the garden, it can be seen thriving in the poorest of sites, the cropping ability of which rarely is sufficient to support more than a few of our common vegetables. When experimenting with this plant the writer took a small garden on Bagshot sand which is naturally light, acid and low in organic matter. This was first dug very carefully in the early winter months and a large number of the roots removed, dried and later burnt. The soil was then tested and the acidic reaction of *p*H 5·6 brought up to the near-neutral figure of *p*H 6·5 by the addition of 10 ozs. of lime per square yard during January. In the spring a dressing of 5 ozs. of fish meal and ½ oz. of sulphate of potash per square yard was given and the ground cropped with Summer Spinach, Early Carrots, Lettuce 'Continuity' and Radish. As soon as the seedlings appeared the ground was regularly hoed once a week and every vestige of Horse Tail lifted out and burnt. By July the crops were over and the ground was then planted-up with a thickly-sown green manure. When frosts inhibited further growth a liberal dressing of composted straw, sulphate of ammonia and coarse hoof and horn meal was applied to the surface and the whole incorporated into the top spit of soil. In the following year (1950) there was a very limited appearance of Horse Tail, and from general observations I should estimate a reduction of about 80 per cent. of "aerial stems." In addition, the general working of the soil and its fertility shows a marked improvement.

From a rough and ready test in a private garden it is, of course, dangerous to draw any conclusions without a repetition of the work under scientific direction although I would commend the practice to Fellows who may like to work along similar lines with, perhaps, minor alterations to suit their own particular requirements.

To sum up the results, it can be said that the effective control of Horse Tail may be brought about by bringing up the acidity of the soil to a neutral figure, by adding a very liberal dressing of fertilizers and organic matter to enable cultivated plants to compete with the weed and, thirdly, by growing crops between which it is possible to apply the hoe regularly.

In rock gardens and among established plants it is not always easy to root out the weed. In cases of this nature, hormone weedkillers may be effectively utilized and readers are here advised to consult the observations of MESSRS. JACKMAN & TINCKER (4).

Other problems in weed control are brought about by man's disruption of Nature when releasing or confining forces which naturally control the spread of obnoxious plants. This point is illustrated by PROFESSOR SKEEN (5). He describes how a strip of land on the Downs 80 feet × 45 feet was enclosed in rabbit-proof netting. The area included a small patch of scrub and a large strip of nibbled turf, the only woody plants on which were two small Hawthorns. Five years later this turfy area showed 22 Hawthorns, 45 young Ashes, 71 Sloes, 7 Oaks, 1 Buckthorn, 1 Dogwood, 1 Hazel, 1 Wayfaring Tree, besides Heather, Brambles and other shrubs.

From a somewhat different angle on this point, it must be remembered that fertile soil always bears a crop; when one plant is destroyed another will inevitably take its place. Thus, after heavy felling of Pines during the war years, a crop of almost useless Birch may be seen springing up; where Bracken is cut repeatedly on some sites, the less desirable Common Nettle (*Urtica dioica*) or the Willow Herb (*Epilobium* spp.) may be found. So, when Bracken has been eradicated from any site it is essential to plant-up the area with some crop before fresh problems of weed control present themselves. This simple but important fact was well demonstrated in the recent work done at Wisley on Battleston Hill under MR. HANGER'S direction. Here, beneath Pines and a few deciduous trees, the ground was covered with Bracken. To clear the site, most of the deciduous trees were felled and some of the Pines thinned out during the winter months. In the following June the young Bracken was cut, and the ground methodically cultivated and manured with spent hops before the Bracken had a chance to produce a second crop of foliage. By December a considerable area was planted mainly with Rhododendrons and Azaleas, followed, when weather permitted, with such good cover plants as species of Vaccinium, Gaultheria and Erica. In the next year very little Bracken appeared, due, in part no doubt, to a thick annual mulch of leaves and compost which, besides checking the growth of any odd fronds, helped in the establishment of the plantings.

When it is not possible to cultivate soil after cutting Bracken, fronds should be cut in June when the first blade is opening and again at the same stage in the second crop. Repetition of the treatment against any

weed of this nature, such as the Nettle, will lead to gradual exhaustion of the underground rootstocks and the death of the plant. It is, of course, important to compost the foliage, as Bracken at the "first frond stage" is particularly rich in potash. In addition a large amount of organic manure can be prepared by admixing these with garden refuse or baled straw and adding a little sulphate of ammonia and sufficient hydrated lime to keep the compost sweet.

In sketching these few cultural aspects of weed control there is no desire to belittle the results often achieved with chemicals. What has been said is, in fact, only an outline of the cultural fundamentals into which can be incorporated easier and often, perhaps, cheaper methods of controlling weeds.

REFERENCES

(1) SECRETT, F. A. (1950): "Present-day problems in horticultural industry," *J. Royal Soc. Arts* **98**, p. 334–350.
(2) MUENSCHER, W. C. (1947): *Weeds*, p. 4.
(3) SUMMERHAYES, V. S. (1951): *Wild Orchids of Britain*, p. 58.
(4) JACKMAN, G. R., & TINCKER, M. A. H. (1949): "The use of a selective weed killer in nursery gardens. The control of Horsetail (*Equisetum arvense*)" *J. Royal Hort. Soc. London*, p. 351.
(5) SKENE, MACGREGOR (1927): *Trees*, p. 235.

WISLEY TRIALS, 1951

BORDER CARNATIONS

Ninety-six varieties of hardy Border Carnations were grown at Wisley during 1951. Of these, thirteen were grown for the first time, the remainder being standard varieties and those retained for future judgment. Four varieties were deleted.

Five plants of each variety were planted, and were inspected by a joint committee formed from The Royal Horticultural Society and the British National Carnation Society, who made their recommendations for Awards as given below.

White Selfs

EDENSIDE WHITE. (Raised and introduced by Mr. J. Douglas, and sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Haywards Heath, Sussex.) **A.M.** July 25, 1951.—Plant vigorous and spreading, height 18 inches with flower stems slender and slightly drooping. Flowers double, 3 inches diameter, of excellent form and partially scented. Petals broad and entire, white with outer ones cream at the base. Calyx strong.

Apricot Selfs

CONSUL. (Raised and introduced by Messrs. Bath Ltd., and sent by Messrs. Allwood Bros., Ltd., Wivelsfield Nurseries, Haywards Heath, Sussex.) **A.M.** July 25, 1951.—Described R.H.S. JOURNAL **62,** p. 457 (**H.C.** 1936).

Pink Selfs

TEVIOTDALE. (Sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Haywards Heath, Sussex.) **F.C.C.** July 25, 1951.—Described R.H.S. JOURNAL **62,** p. 458 (**A.M.** 1937).

DOWNS PINK. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Haywards Heath, Sussex.) **A.M.** July 25, 1951. —Plant very vigorous, 24 inches in height, with flower stems stout and erect. Flowers double, 2¾ inches diameter, a crowded centre and some scent; petals very broad with margins incurving, Dawn Pink (H.C.C. 523); calyx strong.

Cerise Selfs

DOWNS CERISE. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Haywards Heath, Sussex.) **A.M.** July 25, 1951.—Described R.H.S. JOURNAL, **75**, p. 28 (**H.C.** 1949.)

Scarlet Selfs

SCARLET EMPEROR. (Raised, introduced and sent by Mr. Geo. E. Toms, Appley Nurseries, Ryde, I.o.W.) **A.M.** July 25, 1951.—Plant very vigorous, 24 inches in height, with flower stems stout and erect. Flowers double, 2¼ inches diameter; petals broad and entire, Scarlet (H.C.C. 19/1); calyx strong.

DOWNS SCARLET. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Haywards Heath, Sussex.) **A.M.** July 25, 1951.—Plant very vigorous, 24 inches in height, with flower stems rigid and erect. Flowers double, 2¾ inches diameter, a full centre and some scent; petals broad and entire, Orient Red (H.C.C. 819); calyx strong.

Mauve Selfs

GREYLING. (Raised, introduced and sent by Mr. F. W. Goodfellow, Valley Nurseries, Aldridge, Staffs.) **H.C.** July 25, 1951.—Plant vigorous, 20 inches in height, with flower stems stout and slightly drooping. Flowers double, 2¼ inches diameter, with a loose centre and some scent. Petals broad and entire, Pansy Violet (H.C.C. 033/3); calyx strong.

Fancies

DOWNS FLAME. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Haywards Heath, Sussex.) **H.C.** July 25, 1951. —Plant vigorous, 24 inches in height, with flower stems long and very stout. Flowers double, 2½ inches diameter, with a crowded centre and some scent; petals broad and entire, near Shell Pink (H.C.C. 516) edged and splashed between Signal Red (H.C.C. 719) and Dutch Vermilion (H.C.C. 717); calyx strong.

White Ground Fancies

SPRITE. (Raised, introduced and sent by Mr. F. W. Goodfellow, Valley Nurseries, Aldridge, Staffs.) **F.C.C.** July 25, 1951.—Described R.H.S. JOURNAL **75**, p. 28 (**H.C.** 1949).

DUSKY MAID. (Raised, introduced and sent by Mr. F. W. Goodfellow, Valley Nurseries, Aldridge, Staffs.) **A.M.** July 25, 1951.—Plant vigorous, 24 inches in height, with flower stems long and stout. Flowers double, 3 inches in diameter, with a loose centre and some scent; petals broad and entire, white ground edged, flaked and striped Indian Lake (H.C.C. 826); calyx strong.

WATER NYMPH. (Raised, introduced and sent by Mr. F. W. Goodfellow, Valley Nurseries, Aldridge, Staffs.) **H.C.** July 25, 1951.—Plant vigorous, 28 inches in height, with flower stems long and stout. Flowers double, 2¾ inches diameter, with a loose centre and some scent. Petals broad and fringed, creamy white ground edged and slightly striped Ruby Red (H.C.C. 827/3); calyx strong.

GLADIOLI

Two hundred and thirty-nine varieties of Gladiolus were grown at Wisley in the trials during 1951. They were planted on May 1, 1951, and were judged by a sub-committee of Floral "A" Committee on August 10 and 16, when the following recommendations for awards were made.

Flowers White

LEIF ERIKSON. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **A.M.** August 16, 1951.—Height 4½ feet, flower spike eighteen-flowered, ten out at one time. Flowers 5 inches diameter, cream tinged green in the throat.

WHITE VIRGIN. (Raised, introduced and sent by Messrs. P. Visser, St. Pancras, Holland.) **H.C.** August 10, 1951.—Height 3½ feet, flower spike twenty-two-flowered, eight to ten out at one time. Flowers 4½ inches diameter, white with a cream throat.

SNOWSTORM. (Sent by Messrs. A. G. Hulsebosch, Bloemhofstraat 17th R., Haarlem, Holland.) **H.C.** August 10, 1951.—Height 3¾ feet, flower spike seventeen-flowered, seven open at one time. Flowers 5 inches diameter, pure white with a cream throat.

Flowers Yellow

GOLDEN ECLIPSE. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **A.M.** August 10, 1951.—Height 4 feet, flower spike fourteen-flowered, six out at one time. Flowers 4 inches diameter, Straw Yellow (H.C.C. 604) with a flush of Orange Buff (H.C.C. 507).

ARES. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 10, 1951.—Height 4 feet, flower spike twenty-one-flowered, seven out at one time. Flowers 4 inches diameter, Mimosa Yellow (H.C.C. 602/3) deepening to H.C.C. 602/2 on the lower petals, and a blotch of geranium lake at the throat. Early flowering.

ACCLAMATION. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 10, 1951.—Height 4½ feet, flower spike eighteen-flowered, six open at one time. Flowers 5 inches diameter, near Naples Yellow (H.C.C. 903/3) with a splash of Rhodamine Purple (H.C.C. 29) at the throat.

Flowers Orange

HOCHSOMMER. (Raised by Messrs. Wilh. Pfitzer Ltd., Stuttgart, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 16, 1951.—Height 4 feet, flower spike eighteen-flowered, seven out at one time. Flowers 4½ inches diameter, Shrimp Red (H.C.C. 616/1) heavily splashed Mandarin Red (H.C.C. 17/1).

Flowers Rose

CLARA CARDER. (Raised, introduced and sent by Messrs. P. Visser, St. Pancras, Holland.) **H.C.** August 10, 1951.—Height 3½ feet, flower spike seventeen-flowered, six open at one time. Flowers 3½ inches diameter, Porcelain Rose, between two shades (H.C.C. 630 and 630/1) with feathering of Signal Red (H.C.C. 719/2) on outer edges of petals.

Flowers of Pink Shades

SILCHERLIED. (Raised by Messrs. Wilh. Pfitzer Ltd., Stuttgart, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 10, 1951.—Height 4 feet, flower spike nineteen-flowered, nine

out at one time. Flowers 4½ inches diameter, between two shades of Carmine Rose (H.C.C. 621/3 and 621/2), with a blotch of Rose Bengal (H.C.C. 25/1) on Empire Rose (H.C.C. 621) at the throat.

Flowers of Salmon Shades

HOMMERSON. (Sent by Messrs. M. van Waveren & Sons N.V., Leeuwenstein Nurseries, Hillegom, Holland.) **H.C.** August 16, 1951.—Height 5 feet, flower spike twenty-three-flowered, six out at one time. Flowers 4½ inches diameter, Apricot (H.C.C. 609/2) shading towards Nasturtium Red (H.C.C. 14/2) at the margins with a throat of Empire Yellow (H.C.C. 603).

GOOD BYE. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 16, 1951.—Height 4½ feet, flower spike fourteen-flowered, eight out at one time. Flowers 5 inches diameter, Shrimp Red (H.C.C. 616) with deeper streaks on the outer petals, and a throat of bright yellow.

Flowers of Orange Shades

VOX POPULI. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 10, 1951.—Height 3½ feet, flower spike eighteen-flowered, eight open at one time. Flowers 3¼ inches diameter, Shrimp Red (H.C.C. 619) heavily overlaid Mandarin Red (H.C.C. 17/1) and a flush of Apricot (H.C.C. 609/1) on the interior of the petals; a scarlet blotch on apricot at the throat.

Flowers of Scarlet Shades

PRINCE GUSTAV ADOLPH. (Raised, introduced and sent by Messrs. Blom & Padding, Beverwijk, Holland.) **H.C.** August 10, 1951.—Height 5 feet, flower spike fourteen-flowered, eight out at one time. Flowers 5 inches diameter, Scarlet (H.C.C. 19/1) flecked with deeper markings, and a cream blotch at the throat.

Flowers of Red Shades

TITO SCHIPA. (Raised, introduced and sent by Messrs. Blom & Padding, Beverwijk, Holland.) **A.M.** August 10, 1951.—Height 4½ feet, flower spike seventeen-flowered, eight out at one time. Flowers 5½ inches diameter, Signal Red (H.C.C. 719/3) marked a lighter shade (H.C.C. 719).

ERIC KNIGHT. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 10, 1951.—Height 4 feet, flower spike eighteen-flowered, seven out at one time. Flowers 4½ inches diameter, Vermilion (H.C.C. 18) feathered with Mimosa Yellow (H.C.C. 602/2).

DUKE OF EDINBURGH. (Raised, introduced and sent by Messrs. Blom & Padding, Beverwijk, Holland.) **H.C.** August 10, 1951.—Height 4½ feet, flower spike sixteen-flowered, six out at one time. Flowers 5¼ inches diameter, Dutch Vermilion (H.C.C. 717/2), with faint suffused flecking of a deeper shade.

SCARLET PERFECTION. (Raised, introduced and sent by Messrs. P. Visser, St. Pancras, Holland.) **H.C.** August 10, 1951.—Height 4½ feet, flower spike eighteen-flowered, seven out at one time. Flowers 4¾ inches diameter, Dutch Vermilion (H.C.C. 17/1), throat speckled white at back, with a dark maroon rib.

Flowers of Purple Shades

TRADITION. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **A.M.** August 16, 1951.—Height 4½ feet, flower spike fourteen-flowered, seven out at one time. Flowers 4 inches

diameter, Bishops Violet (H.C.C. 34/3) streaked a deeper shade, a blotch of deep amethyst violet with central carmine streak on throat.

BISCHOFSSTAB. (Raised by Messrs. Wilh. Pfitzer Ltd., Stuttgart, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **A.M.** August 10, 1951.—Height 4 feet, flower spike twenty-flowered, nine out at one time. Flowers 4½ inches diameter, near Mallow Purple (H.C.C. 630) with a throat of deep purple.

TRISTAN. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 16, 1951.—Height 4½ feet, flower spike nineteen-flowered, seven open at one time. Flowers 5 inches diameter, Cyclamen Purple (H.C.C. 30/1) deepening to Peony Purple (H.C.C. 729) towards outer edges.

Flowers of Maroon Shades

PRO DOMO. (Raised, introduced and sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **A.M.** August 10, 1951.—Height 4 feet, flower spike nineteen-flowered, eight out at one time. Flowers 4½ inches diameter, Ruby Red (H.C.C. 827/2) deepening to outer edges.

MYSTERIE OF INDIA. (Raised by Mr. C. J. de Goede, introduced and sent by Messrs. A. G. Hulsebosch, Bloemhofstraat 17th R., Haarlem, Holland.) **H.C.** August 16, 1951.—Height 4½ feet, flower spike eighteen-flowered, six open at one time. Flowers 5 inches diameter, near Erythrite Red (H.C.C. 27/3) splashed Dawn Pink (H.C.C. 323), the throat cream with a blotch of Rose Opal (H.C.C. 22/1).

ELITE. (Sent by Messrs. Konynenburg & Mark, Nordwyk, Holland.) **H.C.** August 16, 1951.—Height 4½ feet, flower spike twenty-two-flowered, eight out at one time. Flowers 5 inches diameter, deep Burgundy Purple flushed Cardinal Red (H.C.C. 822/1) fading to Rose Red (H.C.C. 724/2) on base of interior of petals.

PERENNIAL ASTERS

Ninety-seven varieties of Perennial Asters (Michaelmas Daisies) were grown at Wisley in 1951; many of these have received awards in previous years and are grown for comparison with the newer varieties. The trial was inspected by a sub-committee of Floral Committee A on September 20, and October 8 when the following recommendations were made.

The number in brackets following the description of each variety is that under which it was grown in the trial.

Amellus Group

MAUVE BEAUTY. (Raised and sent by B. A. Barrett, Esq., 2 Kelvin Cottages, Rushett Close, Long Ditton, Surrey.) **F.C.C.** October 8, 1951.—Described R.H.S. JOURNAL 75, 26 (**A.M.** 1949). [8]

Novi-Belgi Group

ALEX WALLACE. (Raised, introduced and sent by George Murray, Esq., Duntreath, Blanefield, Stirlingshire.) **A.M.** October 8, 1951.—3 to 3½ feet tall, compact, erect habit. Flowers semi-double, 2 inches diameter, Mauve (H.C.C. between 633/2 and 633/1), disc yellow. [78]

DAVID MURRAY. (Raised, introduced and sent by George Murray, Esq., Duntreath, Blanefield, Stirlingshire.) **A.M.** September 20, 1951.—3½ to 4 feet tall, compact, erect habit. Flowers single, 1½ to 1¾ inch diameter, near Imperial Purple (H.C.C. 33/3); disc yellow. [76]

FESTIVAL. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **A.M.** October 8, 1951.—3½ to 4 feet tall, compact, erect habit, vigorous. Flowers semi-double,

1¾ inch diameter, Orchid Purple (H.C.C. between 31/2 and 31/3); disc bright yellow. [36]

GAYBORDER ROYAL. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **A.M.** September 20, 1951.—3 feet tall, compact erect habit, free flowering. Flowers semi-double, 1¾ inch diameter, near Petunia Purple (H.C.C. 32/1); disc yellow. [26]

HARRISON'S BLUE. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **A.M.** October 8, 1951.—4 feet tall, erect habit. Flowers semi-double, 1½ to 1¾ inch diameter, Campanula Violet (H.C.C. 37/1). [66]

LITTLE PINK PYRAMID. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **A.M.** October 8, 1951.—20 to 24 inches tall, slightly spreading habit. Flowers semi-double, 1½ inch diameter, Mallow Purple (H.C.C. between 630/1 and 630/2). [20]

MELBOURNE BELLE. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **A.M.** September 20, 1951.—2 to 2½ feet tall, compact, erect habit. Flowers semi-double, 1½ to 1¾ inch diameter, Orchid Purple (H.C.C. 31/1); disc golden yellow. [30]

MELBOURNE MAGNET. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **A.M.** October 8, 1951.—5 feet tall, compact, erect habit. Flowers semi-double, 2 inches diameter, near Veronica Violet (H.C.C. 639/2). [73]

WINSTON S. CHURCHILL. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **A.M.** September 20, 1951.—3 feet tall, compact erect habit, very free flowering. Flowers single, 1½ inch diameter, near Beetroot Purple (H.C.C. 830/1); disc brown. Good garden plant. [27]

ALEX NORMAN. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **H.C.** September 20, 1951.—3 feet tall, compact, erect habit. Flowers semi-double, 1¾ inches diameter, Phlox Purple (H.C.C. between 632/1 and 632/2); disc yellow. [34]

JANET McMULLEN. (Raised, introduced and sent by George Murray, Esq., Duntreath, Blanefield, Stirlingshire, and also introduced by Messrs. Burleydam Nurseries (Chester) Ltd., Little Sutton, Wirral, Cheshire.) **H.C.** September 20, 1951.—3 to 3½ feet tall, compact erect habit. Flowers semi-double, 2 inches diameter, near Amethyst Violet (H.C.C. 35/3). [88]

TWINKLE. (Raised by Mr. A. H. Harrison, introduced and sent by Messrs. Gayborder Nurseries Ltd., Melbourne, Derbyshire.) **H.C.** October 8, 1951.—3 feet tall, erect habit. Flowers semi-double, 1½ inch diameter, near Lilac Purple (H.C.C. 031/1); disc golden yellow. [37]

SPRING SOWN ONIONS

Fifty-eight stocks of onions were grown. They were sown on March 21, 1951. The trial was inspected by the sub-committee of the Fruit and Vegetable Committee on October 18, 1951, when the following recommendations for awards were made.

The number in brackets following the description of the variety is that under which it was grown in the trial.

BEDFORDSHIRE CHAMPION SPECIALLY SELECTED. (Sent by Messrs. Watkins & Simpson Ltd., 27 Drury Lane, Covent Garden, London, W.C. 2.) **A.M.** October 18, 1951. [27]

BEST OF ALL. (Raised by Mr. W. Peters, Givons Grove, Leatherhead, introduced by Messrs. Watkins & Simpson Ltd., 27 Drury Lane, Covent Garden, London, W.C. 2, and sent by Mr. J. W. Moles, Bradwell, Braintree, Essex.) **A.M.** October 18, 1951. [29]

BEST OF ALL SELECTED. Raised by Mr. W. Peters, Givons Grove, Leatherhead, introduced and sent by Messrs. Watkins & Simpson Ltd., 27 Drury Lane, Covent Garden, London, W.C. 2.) **A.M.** October 18, 1951. [30]

GIANT ZITTAU SPECIAL SELECTION. (Sent by Messrs. Watkins & Simpson Ltd., 27 Drury Lane, Covent Garden, London, W.C. 2.) **A.M.** October 18, 1951. [14]

GOLDEN ARCADIAN. (Raised, introduced and sent by Mr. F. P. Lewis, 9 Acacia Drive, Maldon, Essex.) **A.M.** October 18, 1951. [32]

HARVESTER. (Raised by Messrs. P. Rood & Son, Bovenkarspel, Enkhuizen, Holland, and sent by The Royal Horticultural Society, Wisley.) **A.M.** October 18, 1951. [36]

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BOOK NOTES

"Trees and Shrubs hardy in the British Isles." By W. J. Bean, C.V.O., I.S.O., V.M.H. Ed. VII: Vol. 1, A.-E, xviii+704 pp., 40 plates (1950); Vol. 2, F–Q, xii+636 pp., 52 plates (1951); Vol. 3, R–Z, viii+664 pp., 41 plates (1951); 8vo. (John Murray, London). 42s. per volume.

The publication of the late Mr. W. J. Bean's classic work in 1914 was a notable event in the history of British horticulture, for since the appearance of Loudon's *Arboretum et Fruticetum Britannicum* in 1838 no book in the English language dealing satisfactorily with the trees and shrubs cultivated in Great Britain had been published. Mr. Bean's years of service in the Arboretum at Kew enabled him to write with full knowledge of his subject, and his accurate non-technical descriptions of plants and reliable notes on their appearance, behaviour, propagation and cultivation have made the work almost indispensable to gardeners. The third volume published in 1933 dealt with a vast number of the less hardy woody plants and proved a valuable supplement to the first two volumes.

The new edition has been eagerly awaited by all who have grown familiar with the original work. The new volumes have the same format and binding as the old, and their contents follow the same convenient arrangement. About one-sixth of the first volume is occupied by twenty-seven chapters opening with an interesting account of eminent collectors and cultivators of trees and shrubs from the middle of the sixteenth century onwards, passing on to the subjects of propagation, cultivation and maintenance. There follow most useful lists of trees and shrubs for special purposes such as street planting and hedging, or possessing outstanding merit in respect of foliage, colour or habit. The second and main part of the work is made up of descriptive articles on the species and varieties of trees and shrubs arranged alphabetically under their scientific names. The authorities and family names are given, together with English names and synonyms where such exist. There are also many references to illustrations in the *Botanical Magazine*. The number of species described has been greatly increased to take into account the numerous introductions to cultivation from the Far East during the past thirty years or so. Of the genus *Rhododendron*, for example, the number described has risen from 110 in 1914 to nearly 350 in 1951.

To the formidable task of revision Mr. Bean devoted the last few years of his life, and the finished work bears abundant evidence of his diligence and care. Even so, one cannot, after critical perusal of its pages, unreservedly accept the publishers' statement that the book has been completely revised. Many passages have been reprinted from the first edition unchanged, although nearly forty years' further experience of the plants concerned would seem to demand different treatment; there are some surprising omissions of species and modern horticultural varieties; and some discrepancies in nomenclature which are likely to be a source of confusion to the ordinary reader.

As an example to illustrate the first of these criticisms we may quote from the article on *Disanthus cercidifolius*, concerning which the author wrote in 1913: "A plant at Kew 3 ft. high, growing in peaty soil in a bed of heaths, is in excellent condition, and was not injured in the least in the winter of 1908–9." This passage, reappearing in the new edition, gives a completely false impression of the rate of growth of the plant. Again, of *Cotoneaster glaucophylla* Franchet the new edition says "It was in cultivation at Kew in 1914, having been sent there from Caerhays. It is now pretty widely spread in gardens and grows freely." Yet we find under the heading *C. serotina* the statement "I have not seen the true *C. glaucophylla* Franchet in the living state and it may not be in cultivation." Then of *Rosa Moyesii* we are told that it " promises to be one of the most attractive of wild roses." May one not yet assume, after nearly half a century, that it has fulfilled its early promise?

Among the excellent plants omitted we may note *Camellia* × *Williamsii*, *Drimys Winteri* var. *latifolia*, *Paeonia lutea* var. *Ludlowii*, *Rubus trilobus*, *Viburnum* × *Juddii* and *Viburnum* × 'Carlcephalum.' Of *Camellia japonica* we learn that its popularity declined after the middle of the nineteenth century, but no hint is given of its recent restoration to public favour. The recommended varieties of *Calluna vulgaris* are precisely the same as in 1914; the modern ones are ignored. Of about sixty Rhododendron hybrids prescribed nearly one-half fail to attain the one-star standard of *The Rhododendron Handbook*.

Many inconsistencies in nomenclature have occurred through incomplete revision. Thus, *Mahonia* of the main part of the book is called *Berberis* in some of the early chapters, and other genera for which more than one name is used are *Campsis*, *Chamaedaphne*, *Aronia* and *Sorbus*. The article on *Cydonia* is likely to puzzle many readers. The common quince *Cydonia oblonga* is described here, and the author has elected to include the ornamental-flowered Japanese and Chinese quinces for which the generic

name *Chaenomeles* is now commonly accepted by botanists and gardeners alike. This treatment would have been tolerable if he had retained the specific epithets at one time generally used in combination with *Cydonia* to denote the several species. But for *Cydonia Maulei* T. Moore (properly styled *Chaenomeles japonica* (Thunb.) Lindley) he has revived the *Cydonia japonica* of Lindley. For *Cydonia japonica* Persoon (the familiar 'Japonica' of gardens, the correct name of which is *Chaenomeles speciosa* (Sweet) Nakai) he retains *Cydonia Lagenaria* Loisel. The index introduces a further complication by suggesting that both are synonymous with *Chaenomeles Lagenaria* (Loisel.) Koidz.

It is regrettable that so valuable a book should be marred by defects of this kind. In a lesser work they might be overlooked, but in one so important they cannot be. It is to be hoped that in the preparation of any future edition they may be expunged.

N. K. GOULD

"Hedges, Shelter-Belts and Screens." By A. D. C. Le Sueur. 128 pp. Illus (Country Life.) 15s.

Except for Chapter 1, which delves into the history of hedges, this is a book on practical things, and presented in such a way that it should be kept handy on the bookshelves of all gardeners and farmers who take, or should take, a serious interest in their hedges, shelter-belts and screens. I would particularly advise every Young Farmers' Club to have a copy available for their members.

Two chapters deal with ornamental hedges, and these are divided into evergreen and deciduous subjects which are more generally used. The lists given are far from being complete, but should prompt the thoughtful planter to think of other plants similar to those mentioned. I was, however, surprised to notice that Pyracanthas have been omitted from the section on evergreens.

The author is, I think, in error in regarding *Lonicera nitida* as the Yunnan Honeysuckle, as this name rightfully belongs to *Lonicera pileata* var. *yunnanensis*, which nowadays is generally considered preferable to *Lonicera nitida*.

I cannot agree that Laurustinus makes a weak hedge and, incidentally, it is doubtfu if this should be classified under Laurels.

Much useful advice is given on such cultural details as planting and clipping, and the tools considered necessary are described.

Mr. Le Sueur is undoubtedly very much at home when dealing with the chapters on Tree Screens, Agricultural Hedges and Farm Shelter-Belts. Particular emphasis is laid on the suitability of Poplars and Willows as screens, and reference is made to the Forestry Commission's Leaflet No. 27 for those who wish to raise their own Poplars. *Populus candicans*, however, will not be generally accepted as the botanical name for the Canadian Poplar.

The chapter on Agricultural Hedges is crammed with useful information, and the practice of laying a hedge is well described.

Farm Shelter-Belts occupy two chapters, and these should be read not only by those who contemplate planting, but also those who may be a little impetuous about clearing existing belts simply because a few more acres may thus be added to the farm. The illustrations on page 94 should be studied in this connection.

A short chapter is given on Coast Screens and Shelter-Belts, but a wider range of plants might well have been given.

Finally, there is a chapter on Hedges, Trees and the Law, and this sets out in clear language many of the points which we all think we know, but about which, after all, we may be somewhat shaky. The inclusion of poisonous plants in hedges, and the liability attached thereto, is dealt with.

Several examples are given where relevant of the costs of various operations, such as planting, but in each case, where I have tested these, the prices are less than I consider they should be, and the reader is advised not to accept them for any specified work without getting up-to-date estimates.

There are twenty-eight very useful illustrations and a four-page index.

F. P. KNIGHT

"Estate Forestry." By Sir William Ling Taylor, C.B.E. 200 pp. Illus. (Crosby, Lockwood & Son, Ltd.) 15s.

"No rural question in Great Britain needs approach with greater understanding and sympathy than the problem of the Private Woodlands."

This statement, made at the beginning of the author's preface, is a fact with which no one, knowledgeable as regards British forestry, can possibly disagree.

Sir William Taylor, himself possessing the understanding and sympathy required, has produced a book which will be of the greatest interest and value, not only to those actually practising forestry, but also to the many who are interested, or require interesting in the subject.

Although emphasis is laid on the fact that it is impossible to cover the whole of forestry in one book, the author appears quite adequately to have dealt with the major problems that face the forester to-day.

Perhaps the most outstanding chapter is that which deals with the very vexed question of "Compound Interest in Forestry." This problem is discussed in a practical, matter-of-fact manner, and should be of considerable interest to those foresters who are apt to be swayed by the economist.

The book is avowedly non-technical. It is easy to read and to understand. The photographs are good and carefully chosen, but the number could have been doubled with advantage.

The author expresses the hope that this book will help to clarify ideas. It will.

A. D. C. LE SUEUR

"Vegetable Growers' Guide." By Chas. H. Oldham, N.D.H. 472 pp. Illus. (Crosby Lockwood.) 25*s*.

For a long time there has been a need for a standard textbook covering all aspects of vegetable production. Professor Stoughton, in his Foreword to *Vegetable Growers' Guide*, points out how, with few exceptions, most books on this subject show "a depressing similarity in approach and outlook." Mr. Oldham achieves distinction by presenting a work which is different from so many which have preceded it on the same subject.

He has had ample opportunity in his capacity as Horticultural Officer with the Ministry of Agriculture to acquaint himself with growers' methods and their difficulties, and he has been able to put those opportunities to advantage by producing a book which is both comprehensive and authoritative.

By treating his subject from a commercial standpoint, the author does not place this book beyond the interest of the amateur gardener. There are forty-five chapters, each dealing with a different crop. Whether grown in the open, frame or greenhouse, each is outlined plainly and concisely from its botanical features right through to the final operations of harvesting and marketing. Descriptions in some chapters are necessarily brief as prominence has been given to crops of major value.

Anyone who contemplates writing on pests and diseases is faced with material which is legion. This field has been handled by the author in such a way as to cover all the necessary data which the gardener is likely to need. There are some growers, of the older school, who consider the analytical chemist a menace to mankind: but it can be safely stated that, whatever one's views, the modern approach and remedies have been admirably set out by Mr. Oldham.

In two Appendices there is sound advice on "Machinery and Irrigation"; there is also an Appendix on "Crop Recording."

The volume is well illustrated and should make an appeal to students of horticulture as well as to commercial and amateur growers.

J. A. SECRETT

"The Book of the Geranium." By John E. Cross. 184 pp. Col. pls. (Saturn Press.) 18*s*.

The title of this book is slightly misleading, for it deals not with the genus Geranium but with the plants commonly known as Geraniums in gardens, i.e. members of the genus Pelargonium. It is generally recognized that interest in Pelargoniums has now revived, especially in zonal Pelargoniums, and to these Mr. Cross devotes much of his book. Conditions in Britain are very different from those across the Atlantic envisaged in the useful American work, *Geraniums, Pelargoniums*, by Helen van Pelt Wilson, published in 1946, and we are accordingly grateful for a British book. In this country there has been no serious attempt to deal with the subject since Robert Sweet's *Geraniaceae* in the reign of George IV, apart from Peter Grieve's little book *History of variegated zonal Pelargoniums* published in 1868 with a second edition in 1869, and sporadic reports on trials held by The Royal Horticultural Society. Of the 130 varieties listed by Grieve, and even of 150 listed by Walter Wright in 1902, hardly a score can be found in current catalogues. Mr. Cross believes that about 400 are available in this country but the American Pelargonium Society has already registered nearly 5,000 names. At present there is much confusion in nomenclature and some of the identifications by Mr. Cross will probably be questioned. The historical aspect has still to be investigated thoroughly. Strange as it may seem, we have yet to learn the full history of that most widely cultivated variety, everybody's scarlet (actually vermilion) Geranium 'Paul Crampel,' which was put into commerce in 1892, not 1902 as stated in this book. The cultural directions form the most valuable part of this very readable and interesting book. Mr. Cross writes from practical experience and has

profited from that of others, notably the veteran Mr. Clifton of Chichester. The results of experiments with artificial light, tabulated at the end, should prove a useful guide to those interested in interior decoration. The illustrations, some of them from the water-colours of Mr. Anthony Lake, are attractive.

MARTIN ROBERTS

"Drawings of British Plants." By S. Ross-Craig. Part 5. Illus. (G. Bell.) 10*s*.

Miss Ross-Craig's courageous and public-spirited venture of illustrating the British flora with detailed drawings is brought a little nearer to completion by the publication of this fifth part which is devoted to the family Caryophyllaceae. Sixty-six species are portrayed, among them the mysterious little *Sagina Boydii*. This part maintains the high standard that characterizes the earlier parts.

W. T. STEARN.

"The New Chrysanthemum Treasury." By J. H. Goddard. 262 pp. Illus. (W. H. & L. Collingridge Ltd.). 15*s*. 0*d*.

A book on Chrysanthemums by Mr. J. H. Goddard must be full of useful information, for who has not heard of Mr. Goddard and his successes at Shows throughout England and there can be few who have not gained by his readiness to impart knowledge to all who seek advice or through his articles in gardening papers; his knowledge is recognized and respected throughout the whole world wherever Chrysanthemums are grown.

This book covers every aspect of Chrysanthemum growing and exhibiting as it affects the amateur grower. Being a practical grower, exhibitor and judge he can give all sections of the Chrysanthemum community useful hints and advice. The black and white pictures in this book are excellent though they do not in every case illustrate the best methods as set out in the text. Some very good colour plates are used—perhaps the best we have seen in a popular book on Chrysanthemums but they are not all correctly named. Pride of place is given to a picture in colour of 'Harold Alston'—an excellent reproduction which does full justice to the colour of the variety. How disappointed many readers will be when they attempt to grow this variety and find how difficult it is to produce a healthy crop.

In the amateur and trade press we have read a lot in recent years of the need to reduce the number of varieties in our catalogues. This book, instead of giving a concise list of absolutely reliable sorts, gives a list of over 630 varieties from which the reader is left to make his choice. In some cases the varieties are not classified according to the published list of the National Chrysanthemum Society. Some bad mistakes have been made here.

The beginner who can get such good advice from the first 157 pages will be left bewildered by the hundred pages of names. There are varieties which may be very good but they are too old to be found in most catalogues: others are so new that only their raisers have grown them.

In spite of these criticisms this is a good book and most useful so far as the first 157 pages are concerned.

JOHN B. STEVENSON.

"A Book of Trees." By Adrian Hill. 103 plates. (Faber and Faber Ltd.) 30*s*.

There are many books on trees and artists have for long been interested in featuring their forms in winter as well as in summer. It is doubtful, however, whether these drawings will help many people to identify their trees. A number of the specimens unfortunately are not very typical of the species intended nor are many characteristic features, such as the peculiar bark of the Sweet Chestnut, shown.

"Air Layering with Polythene Film." An additional note.

Mr. Joseph Forster of Marlow, Buckinghamshire, has pointed out that the Scotch Electrical Tape No. 33 mentioned in the article "Air Layering with Polythene Film" in the April, 1952 JOURNAL has been made in this country for some years and is sold in any stationers under the name of "Speedfix," Adhesive Tape or "Sellotape". Scotch Tape in the U.S.A. was simply the original name given to Transparent Cellulose Film coated with a self-adhesive transparent coating.

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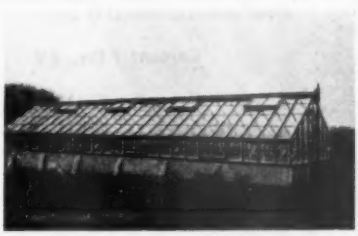

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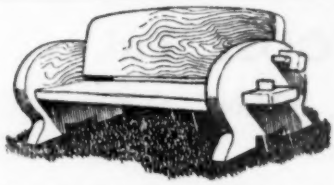

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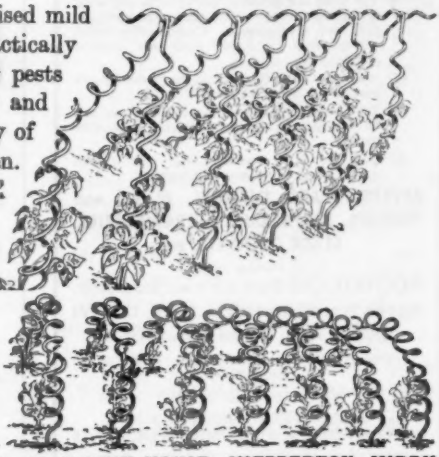

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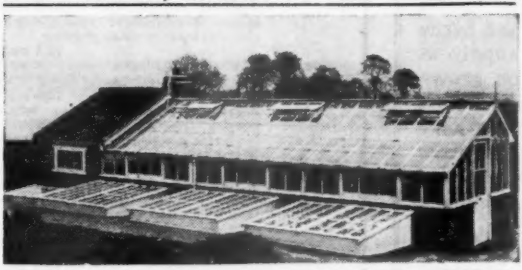

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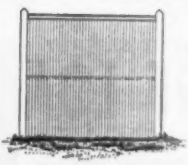

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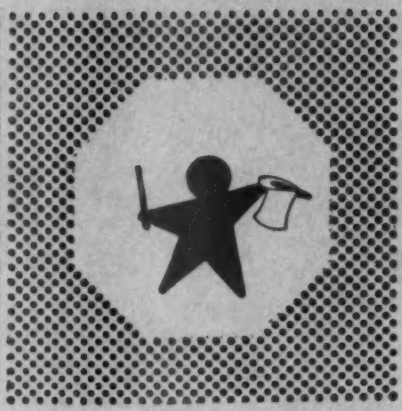

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